DRIVEDATA
DR3 DVR

User's Manual

Version 2.0.5
2009-05-01

CAUTION!!!

Read this User Manual carefully. There are no user serviceable parts inside. Removing the end plate screws will void your warranty. If your DR3requires servicing, please contact your authorized distributor or factory.

Do not use the 1 Channel DR3 to power other devices other than a single camera!!

Do not use the 2/3/4 Channel DR3 to power other devices other than two cameras!!

This document is a work in progress and reflects only the version of the DR3 device.

Contents

1. Introduction

1.1 Introduction of DR3

The DR3 is a dedicated battery powered Digital Video Recorder designed for portable, mobile Video and Audio Recording applications. The DR3 hardware system uses ARM9 processor and advanced hardware MPEG-4/2 video encoder, CF slot, charging circuit, vibration/alarm circuit, video capture, Multi-Connect camera/microphone interface and MCU designed on board. The MCU is used to process remote control, push buttons, power management, LANC and alarm. CF slot can support CF with FAT32 files system. Recorded video on CF card can be replayed on a PC instantly.

The OS of DR3 is Linux. It handles multiple tasks in real time, for example; driver, recording, AV synchronization, file management and external events etc.

The common Compact Flash card is used as a storage medium. The CF card is a solid storage media with the best anti-shock capability available today. It is also low powered and provides fast speed with multiple diversity options. It is very good choice for mobile DVR applications.

DR3 offers two encoding formats, MPEG-2 for DVD and MPEG4 for archive and streaming video.

1.2 MPEG-2

MPEG-2 is a standard for generic coding of video and audio. It is widely used in consumer electronics, such as DVD video disc, DVD player, DVB television broadcasting etc. The DR3 can record in MPEG-2 format which can be edited by any video editing software or replayed by DVD player.

1.3 MPEG-4

MPEG-4 is the awesome new generation video standard with better video quality and higher compression rate. For exceptional disc space saving, MPEG-4 is capable of creating highly compressed video archives on a regular CD-ROM with almost the same quality of DVD. One popular MPEG-4 format is DivX. It is the only technology that enables streaming of video on the internet possible. Now, many DVD players can play DivX files directly.

1.4 Features

✧ Battery powered for portable, mobile DVR applications

- ✧ Intelligent and uninterrupted battery and AC power swap in real time
- ✧ Capture Video & Audio live from any composite video output
- ✧ Support MPEG-4/2 video format for longest record time
- ✧ Video Bit Rate : 1M~10Mbps
- ✧ Frame Rate : PAL(25fps), NTSC(30fps)
- ✧ Support PAL/NTSC/SECAM standard
- ✧ Resolution : Full-D1, CIF/SIF (1M Bitrates)
- ✧ Supports Single File & Full Disk Cycle Record Mode
- ✧ Supports ADPCM Audio Format
- ✧ Supports Volume Gain adjust of Microphone
- ✧ Audio Sampling : 8/16/32/48KHz
- ✧ On-board IR remote controller
- ✧ LANC remote controller support
- ✧ AC adapter or Internal Rechargeable Li-Ion Polymer Battery
- ✧ On-board battery charging circuit
- ✧ Offers power for camera & MIC
- ✧ Changeable CF Flash Card to save video
- ✧ Multi-Color LED for status
- ✧ Micro Vibration Motor (Optional) or Beep status warning
- ✧ Motion Detection support
- ✧ OSD and RTC
- ✧ Optional Lap Timer
- ✧ Optional GPS & G-Force
- ✧ Palm sized
- ✧ Only 160g weight with battery and CF card
- ✧ Video/Audio input
- ✧ Linux OS and upgradeable firmware
- ✧ Support Windows 98/ME/NT/2000/XP/Vista for Playback

1.5 Product and Accessories

DR3	1pcs
AC Power Adapter	1pcs
Recharge Li-ion Polymer Battery (Internal)	1pcs
IR Remote Control	1pcs
Network Sync Cable	1pcs
Multi-Connect/Lockable CAM/AV Adapter Cable	1pcs
Buckle for DR3	1pcs
External Beacon Receiver (Only for Lap Timer Edition)	1pcs
High Sensitivity GPS Antenna (Only for GPS Model)	1pcs

**** Power adapter and battery are for DR3 only and don't use any other power adapter and battery instead in case of damage.***

**** When you connect AC power adapter to charge internal Li-Ion battery but don't record, please enable Power-Off option to decrease heat of DR3 & protect DR3 .***

2. Installation

2.1 Preparation

Please read user's manual careful before installation. Check the minimum requirements of system and recommended system configuration.

2.1.1 DR3 Configuration

- ✓ Network Sync Cable
- ✓ SanDisk Ultra II CF card, 512MB minimum

2.1.2 PC configuration for replay

- ✓ CPU : Pentium III 1G and above
- ✓ RAM : 512MB and above
- ✓ DVD Recorder : DVD±R/RW
- ✓ OS : Windows 2000 (SP4), Windows XP (SP2), Vista
- ✓ HDD : 7200RPM, 10G free space
- ✓ Display : 1024x768 and above, 24/32 bit color depth
- ✓ Graphic Adapter : Support DirectX 9.0c
- ✓ NIC Adapter : 10/100 base-T Ethernet Adapter on PC or Switch/HUB with MDI/MDI-X support
- ✓ USB : One free USB 2.0 host interface
- ✓ Card Reader : one high speed USB 2.0/IEEE 1394 card reader

2.2 Installation Guide

2.2.1 Before Installation

1) Check all accessories and CF card
2) Format CF card with FAT32 file system if it is new
3) Check power adapter and battery
4) Check whether PC and peripherals match the recommended configuration

2.2.2 Installation

1) Make sure power switch is in off position
2) Insert CF card into CF slot on DR3
3) Connect camera properly

2.2.3 Startup

1) Connect AC power adapter
2) DR3 will start self-diagnostics when power on
3) The LED is red in self-diagnostics and will turn yellow on start-up. The LED turns to green once start-up successful.
   It takes about 12 seconds to startup
4) The LCD displays **Init…** during startup, after startup successful, the LCD will display **DR3**
5) You will hear a beep one time once DR3 start-up

6) The battery will be charged automatically when power on and LED turns on red

The battery should be fully charged before first use. The charging LED goes out once charge finished.

Please charge the internal Li-Ion Polymer battery over night & until the charging LED goes out. Li-ion Polymer rechargeable battery is expendable.

The battery should be replaced after 500 charge cycles. The used battery should be disposed properly.

2.2.4 Safety and Warning

**** Never connect Multi-Connect Cable Power output to any power adapter. It may be damage the interface and board.***

**** There are no user serviceable parts, please do not open the unit. Doing so can damage the unit and will void your warranty.***

**** Restrict input voltage to range from 9V to 15DC, 12V DC is recommended. Never apply DC voltage beyond this range or AC voltage to the DR3 .***

**** Only use AC power adapter supplied with the unit. Do not use third party AC power adapter, it may cuase unexpected problems or damage.***

**** Restrict powering devices drawing more than 200mA current for 1CH DR3 .***

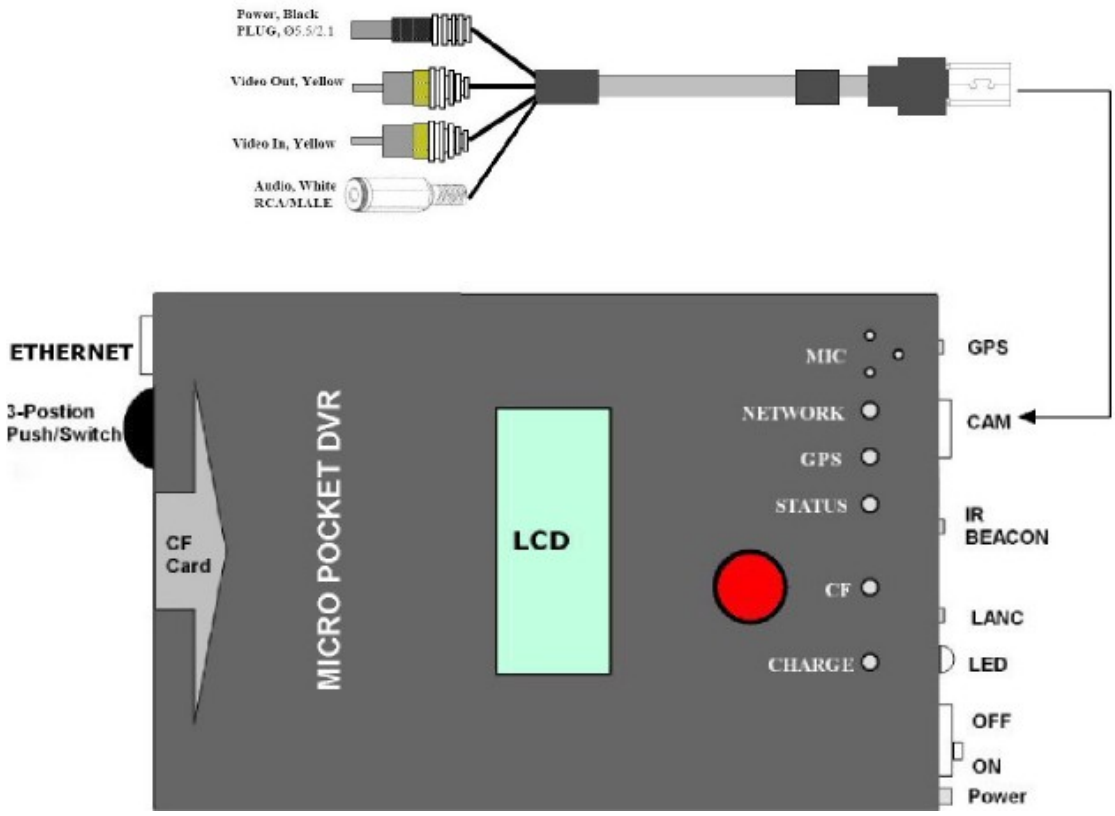
**** Restrict powering devices drawing more than 700mA current for 4CH DR3 .***

**** When DR3 powered by internal battery, don't connect camera more than 1pcs for 1CH DR3. And don't connect cameras more than 2pcs for 2CH/3CH/4CH DR3 .***

**** Never insert and remove CF card while power is on.***

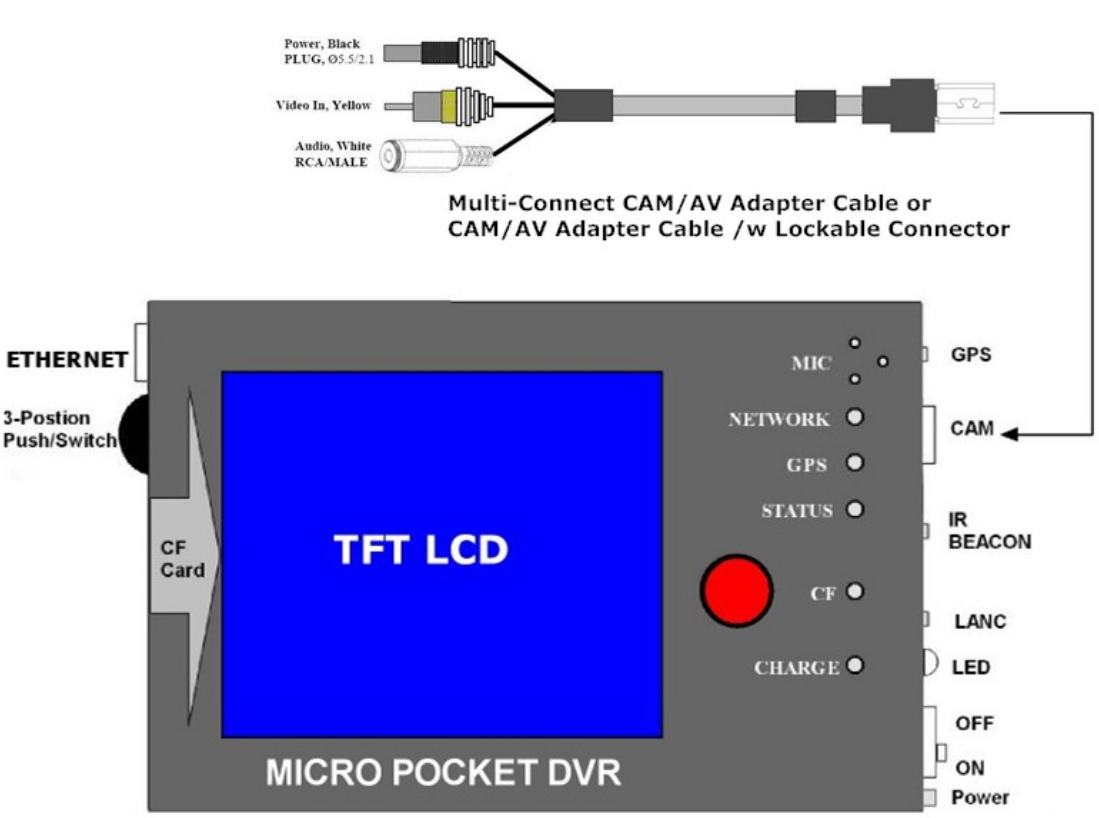
2.3 Connect Video/Audio signal & Monitor to DR3

2.3.1 DR3-S1



DR3-S1 support video output, you can connect external LCD or monitor to preview real-time recording video & adjust angle of view of camera.

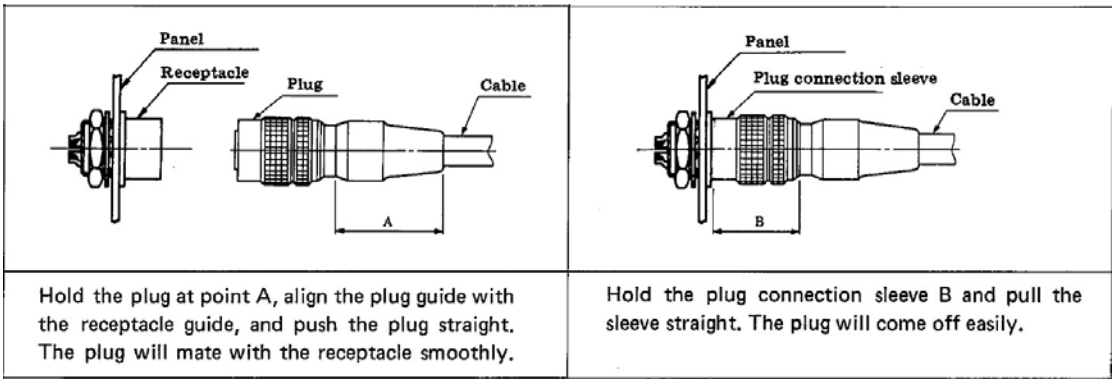
2.3.2 DR3-X1



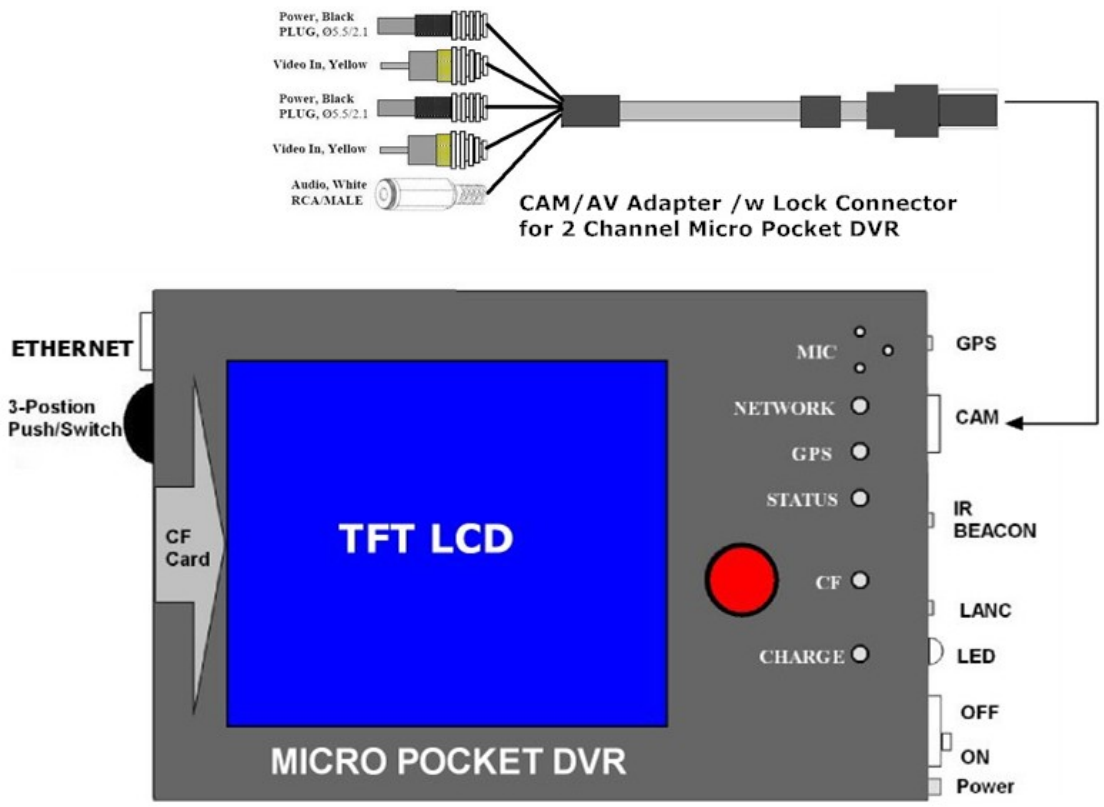
DR3-X1 has not enough power for external LCD or monitor because it has large TFT LCD, you can preview real-time recording video & adjust angle of view via camera on TFT LCD on DR3-X1.

If your DR3-X1 with lockable connector, please note don't circumgyrate lock connector to avoid connection be disconnected.

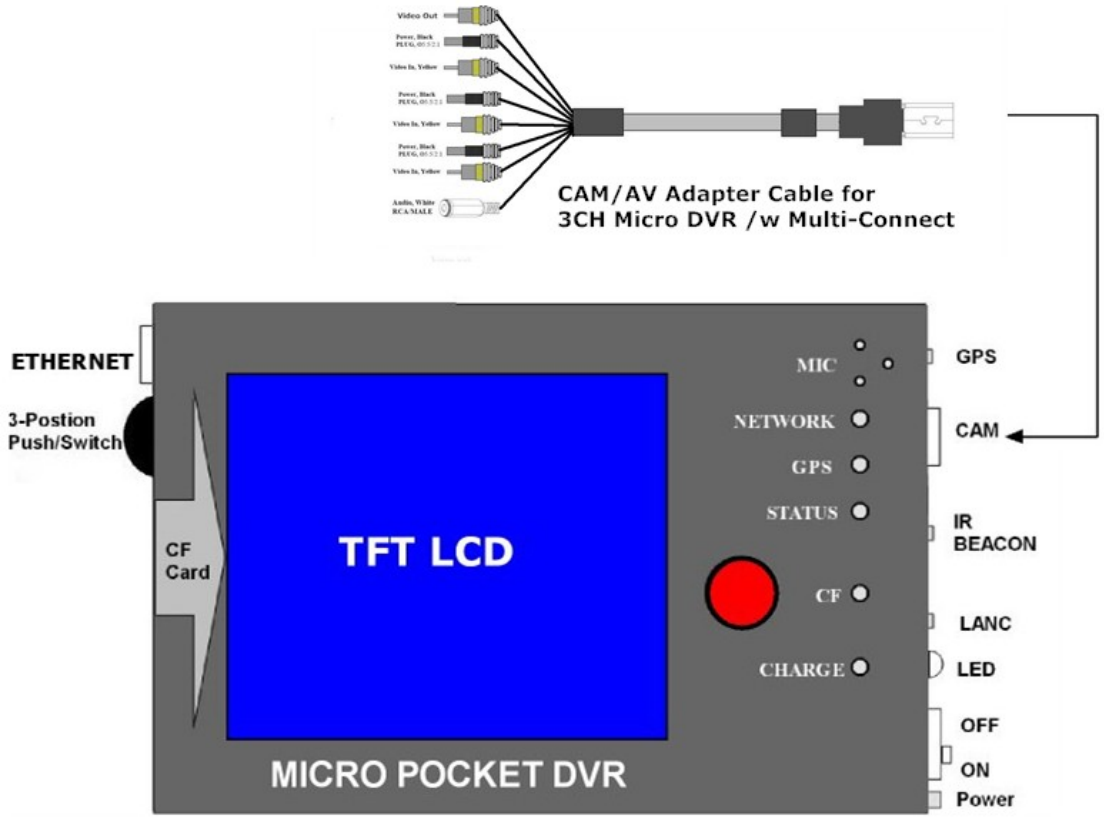
Please plug & unplug lock connector cable according to follow scheme!



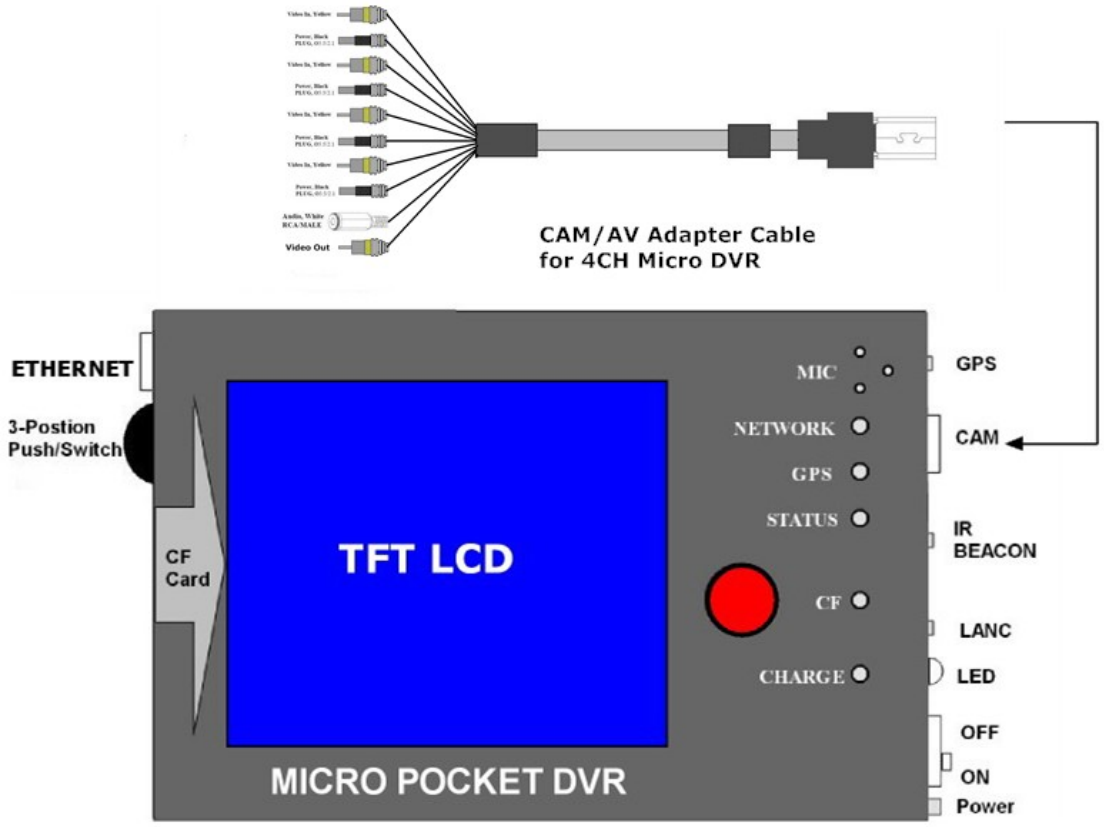
2.3.3 2 Channel DR3



2.3.4 3 Channel DR3



2.3.5 4 Channel DR3



CAM/AV Adapter Cable for 4CH DR3 include two different model, one with BNC connector for video input/output, other with RAC connector for video input/output.

4CH DR3 can power two cameras using internal battery, when your cable is model with BNC connector, please use **POWER3** & **POWER4** power jack for camera that power by 4CH DR3; when your cable is model with RCA connector, please use **POWER1** & **POWER2** power jack for camera that power by 4CH DR3.

2.4 Video and Audio Interface

If the DR3-S1s configured RCA video interface & standard 3.5mm audio jack, the colors correspond to:

Yellow RCA Interface	-	Video Input/Output
Black 3.5mm Jack	-	Audio/Microphone
Black 3.5mm Plug	-	Power Output

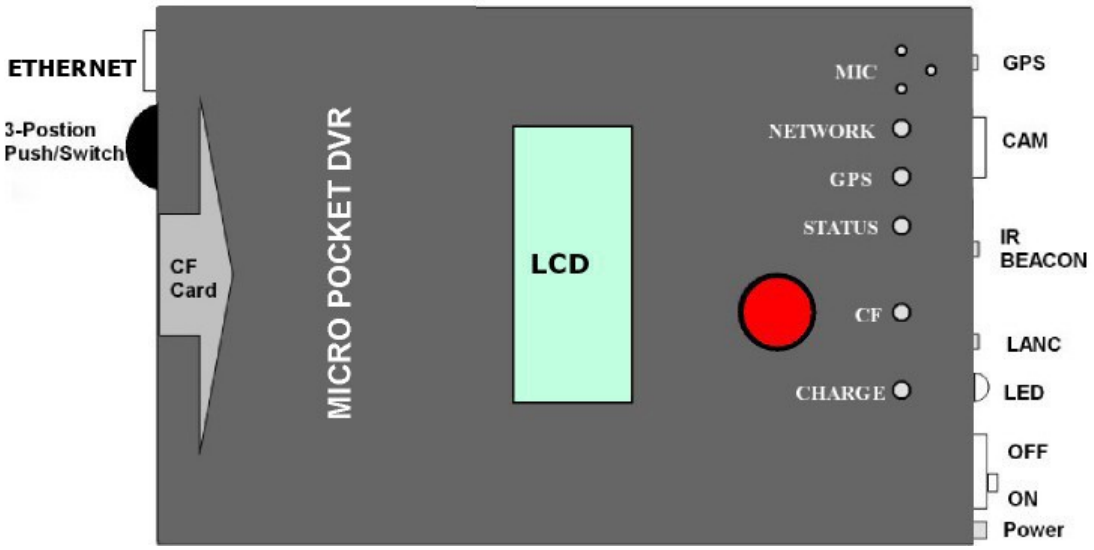
2.5 Button/Bullet Camera Interface

Some button cameras can connect to DR3 directly without the jump cable if the interface of button camera conforms to the Multi-Connect interface in Appendix.

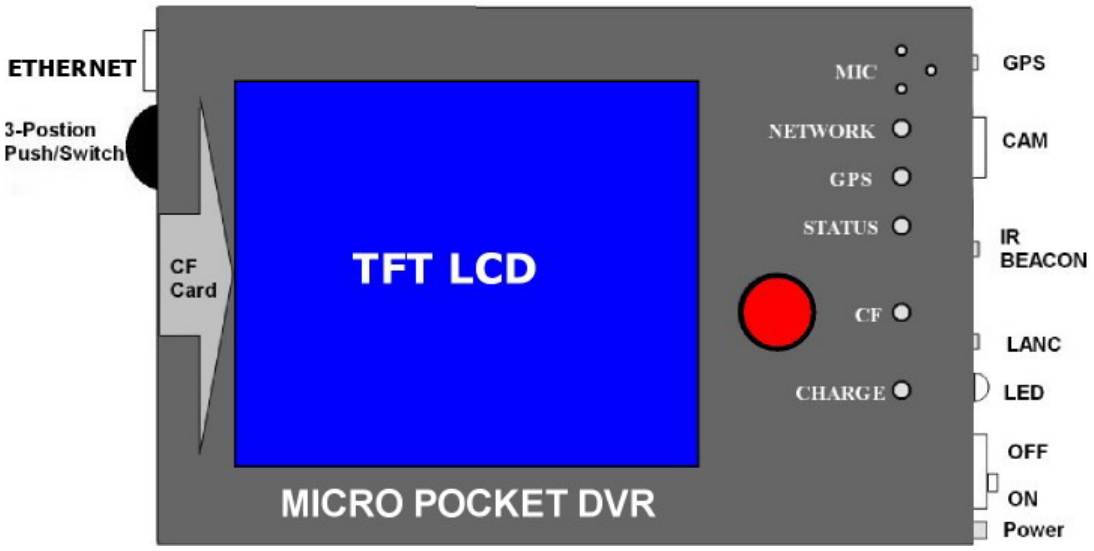
2.6 Eject CF Card

1) Wait until the LED turns green
2) Disconnect power adapter & Switch off power from the internal battery
3) Eject CF card

3. Operation of DR3



DR3-S1



DR3-X1
2CH/3CH/4CH DR3

3.1 Quick Start

No configuration is required to start recording with the DR3 .

The operation of the DR3-S1s quiet simple. There are two push buttons, REC button and 3-Position switch. An LED is used to indicate the status of operation.

3.2 Push Button

3.2.1 RECORD

Press the  (REC) button on top of DR3 for at least one second to start recording.

The LED will flash red and you will hear three beeps.

The flash frequency is about 3 times per second. Slower flash frequency means no video signal is connected.

3.2.2 STOP

Press the  (STOP) 3-Position button for at least three seconds to stop recording. The LED turns to green & you will hear 2 beeps.

It will take a short while to save buffered data after stopped. The power can not be turn off until the LED changes to green. Early eject the CF card will cause destroy of video file integrity. Disconnect AC power adapter and switch off battery before eject CF card.

3.3 Infrared Remote Control

Infrared remote control is optional for DR3 .
Three buttons are defined currently:

Start recording


Stop recording


Keep pressing to make DR3-S1n Standby/Wakeup mode

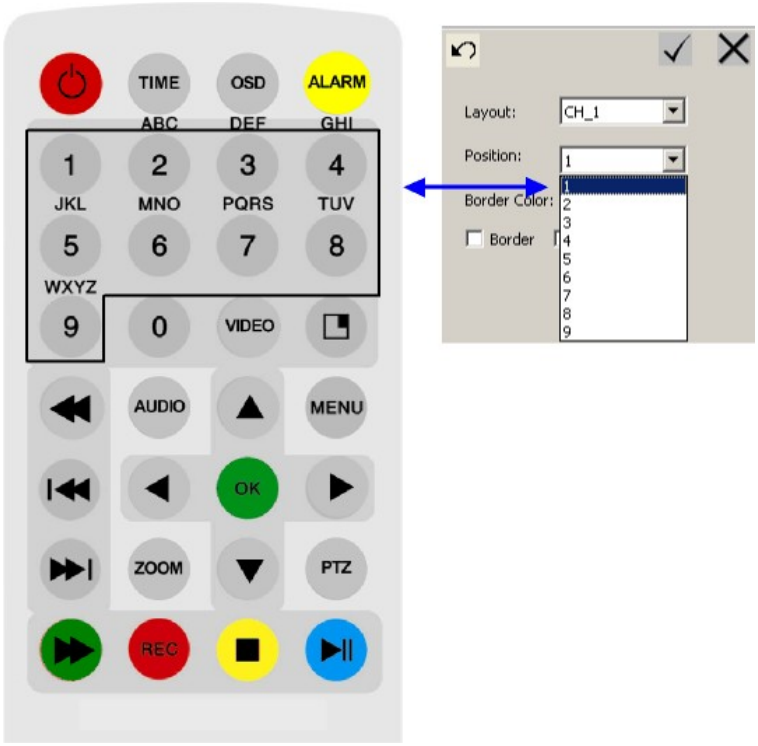
3.4 Infrared Remote Control for 2/3/4 Channels DR3

The numeric key on the IR remote controller controls 9 positions of Picture-In-Picture, you can configure it & select any one array method as your default array using the DR3 Desktop.

You can switch the array method using numeric key on the IR remote controller directly when you record the video using 2/3/4 Channels DR3 . The numeric key 1~9 is opposite with 9 items in **Position** pull down menu.

Numeric Key on IR remote Controller	Item in Position Menu
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Table showing numeric key on IR remote controller & Position menu



NOTE :

- **Numeric key on the IR remote controller are used for 2/3/4 channels DR3 only.**
- **Numeric key on the IR remote controller are used only when you set Layout to PIP on 2/3/4 Channel area.**
- **For 2/3 Channels DR3, some numeric key on the IR remote controller are invalid.**

3.5 LANC Remote Control

The DR3 support multi-version LANC Remote Control, please power off DR3 & unplug AC Power adapter, then plug LANC remote control into LANC jack with logo.

NOTE : SkyTools CamEYE SPORT LANC Remote Control V1.4 & V1.6 are supported by the DR3 .

Power on the DR3 , after booting is finished, you can control the DR3 start/stop recording using LANC remote control. And you can power off DR3 & power on it again.

After the DR3 starts successfully, the status LED on LANC remote control will display green. Press the button on the center of LANC to start recording, and the status LED on LANC will flash red & the unit beeps 3 times once started successfully.

Press button again, the DR3 will stop recording; the status LED on LANC turns to green.

Holding the button on LANC for approx 3 seconds until the status LED on LANC flashes red. This will power down the DR3 , when the DR3 powers down, the status LED on LANC turns to yellow.

In power off status, press button on LANC to power up the DR3 again.

NOTE : DO NOT PLUG OR UNPLUG LANC REMOTE CONTROL WHEN DR3 POWER ON & AC POWER ADAPTER IS CONNECTED !! YOU MUST POWER DOWN THE DR3 , UNPLUG AC POWER ADAPTER, THEN PLUG/UNPLUG LANC REMOTE CONTROL.

3.6 Power Off/On TFT LCD on DR3-X1 & 2/3/4CH DR3

To save the battery power, you can enable the DR3-X1 & 2/3/4CH DR3 TFT LCD off automatically depend on the timer that you set.

The default status of LCD OFF is disabling.

You can enable LCD OFF function & set feat timer under LCD configuration menu.

When you enable **LCD OFF** function & set timer, the TFT LCD on DR3-X1 will power off automatically at once special timer that you set finish.

To power on TFT LCD again, please hold button 2 second to power on TFT LCD under normal status; if DR3 under recording status, please hold button 2 second to power on TFT LCD again.

3.7 Video Quality

LQ: Record video using 1Mbits/s & video based on CIF/SIF resolution.
EP: Record video using 2Mbits/s.
LP: Record video using 4Mbits/s.
SP: Record video using 6Mbits/s.
HQ: Record video using 8Mbits/s.
UQ: Record video using 10Mbits/s without audio

The recorded file size is dependent on the complexity of movement objects. The following is the estimated recording time:

LQ : 100 min/GB
EP : 60 min/GB
LP : 40 min/GB
SP : 20 min/GB
HQ : 15 min/GB
UQ : 12 min/GB

Larger storage cards can yields longer recording time and better picture quality. For example, current capacities of CF card on the market are from 512MB to 16GB. 4GB CF cards can record 4 hours in EP mode.

EP mode is recommended for slower moving or still background scene with some moving objects in front. SP mode is recommended for fast moving background scenes.

3.8 Video File Name

Recording video file name starts with DVR_ by default. DR3 can support two filename formats.

3.8.1 Standard Filename

The file name will be **DVR_xxx.avi**. XXX is incremental from 000 to 999. The prefix DVR_ can be modified in DR3 Desktop software.

3.8.2 Extended Filename

Under extended filename, you can name recording video using time that you record & frames of recording video, the details of extended filename as follow:

DVR_20_34_12_05.mpg

DVR = unique ID set by system.ini
20 = hours (24 hour clock)
34 = minutes
12 = seconds
25 = frame number

To change filename of video to extended format, you can set it in DR3 LCD menu, enter menu, select RECORD item, then select FILENAME sub-item, then change filename from Standard to Extended format.

For details of change filename, please refer **Chapter 12 : Configure DR3 using LCD Menu**.

4. DR3 Status

4.1 Status of DR3

- Power up: LED is yellow for less then 1 second.
- Self diagnostics: LED is red for about 10 seconds.
- Normal: LED is green. Means it is ready to record.
- Recording: red LED will flash about 6 times/second.
- CF full: yellow LED will flash.
- Battery Low: Recording is stopped automatically. LED flash 4 times and enters sleep mode
- Standby: LED is yellow. Only the (POWER) button or LANC can wake it up.
- No Video: LED will slowly flash red whilst trying to record.

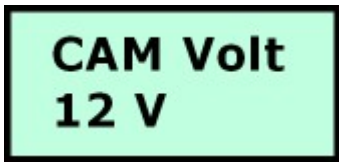
4.2 Preview System Information via Shortcut Key

When DR3 starts successfully, you can turn 3-Position switch to LEFT/RIGHT or UP/DOWN to preview system information of DR3 .

4.2.1 DR3-S1

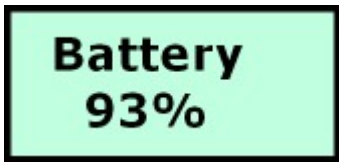
Turn 3-Position switch to LEFT once to display current date & time on DR3 .

Turn 3-Position switch to LEFT twice to display current output power voltage for external camera.



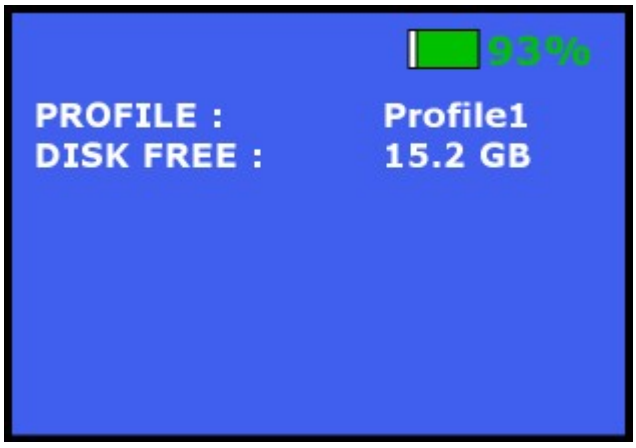
Turn 3-Position switch to RIGHT once to preview current profile item & available storage space on CF card that insert into DR3 .

Turn 3-Position switch to RIGHT twice to display current energy of internal Li-Ion Polymer battery.

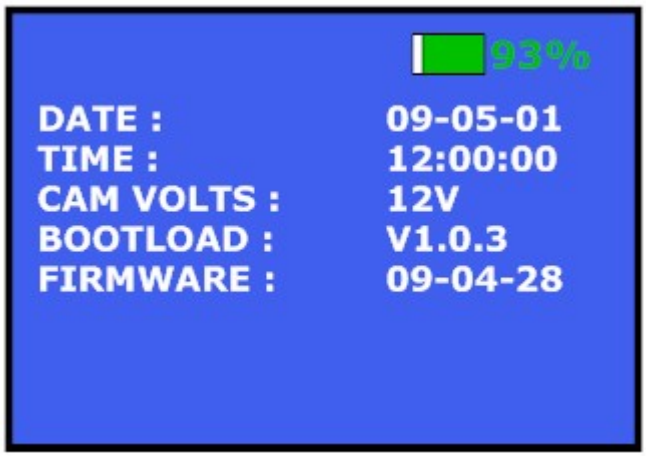


4.2.1 DR3-X1 & 2/3/4CH DR3

Turn 3-Position switch to UP once to preview current profile item & available storage space on CF card that insert into DR3 .



Turn 3-Position switch to DOWN once to display current date & time, output power voltage for external camera, current boot loader & firmware information on DR3 .



5. Replay Video

5.1 Software

It is simple to replay video recorded on CF card. Media player can play the video files directly within Windows.

DivX Codec or player has to be installed if no related components are installed on PC. You can download DivX decoder from internet & install it. We recommend the use of VLC media player which can be downloaded for free on the internet.

5.2 Card Reader

High speed card readers are recommended for read and replay of recorded video. If the card reader is fast, your PC can replay video instantly from the CF card without coping video file to PC hard disk first.

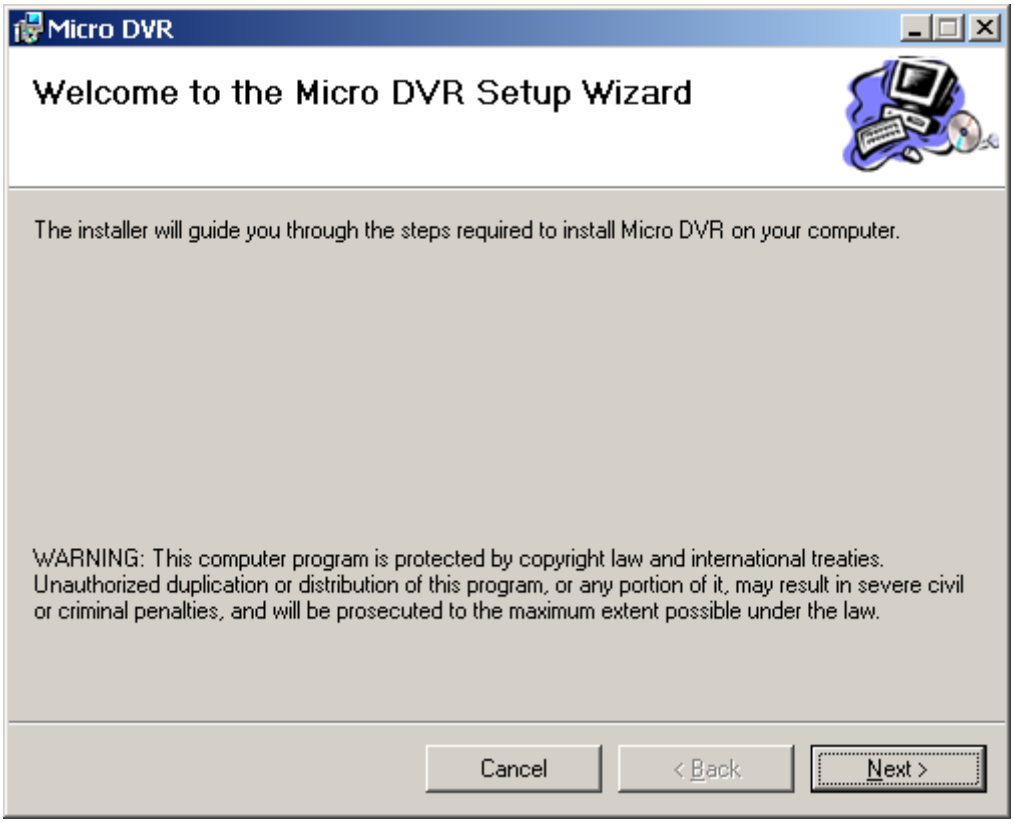
5.3 PCMCIA Interface

Most laptops have a PCMCIA interface. CF card with a PCMCIA adapter can be read directly by Laptops with this interface. Please select feat PCMCIA-CF Adaptor to copy the video files to PC and then replay the video files because PCMCIA is relatively slower.

6. Install DR3 Desktop

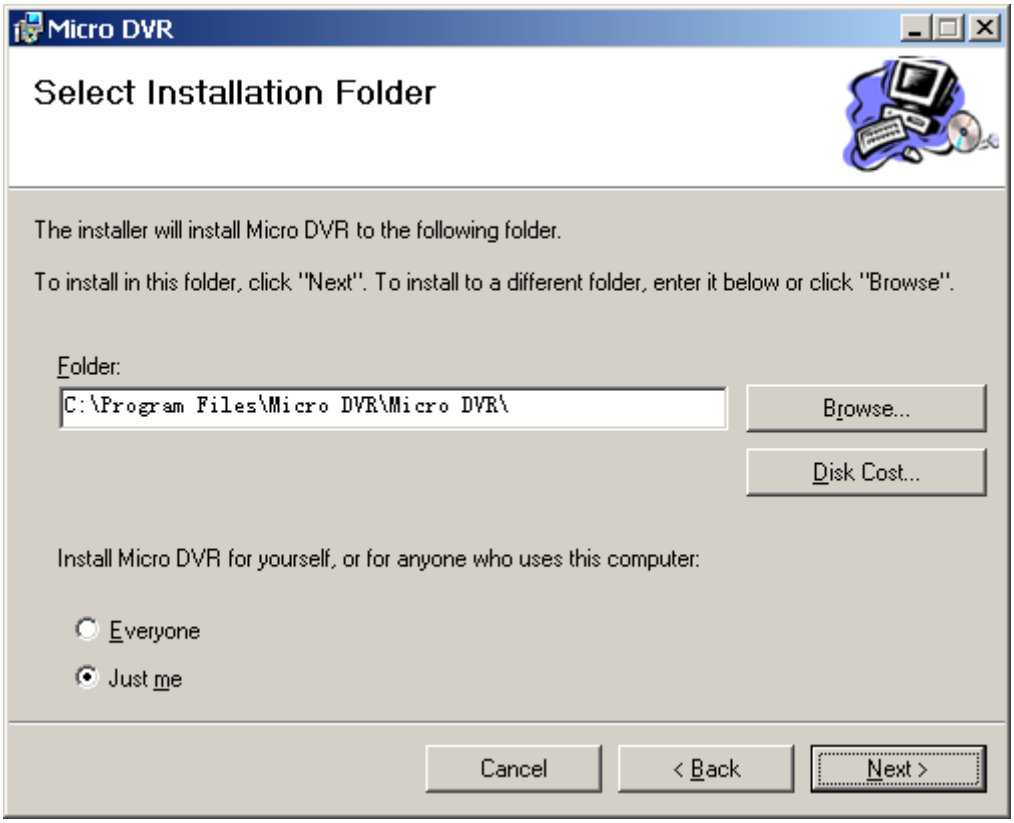
6.1 DR3 Desktop Installation

Install DR3 Desktop before you use the DR3 for the first time. Run **setup.exe** to install DR3 Desktop.

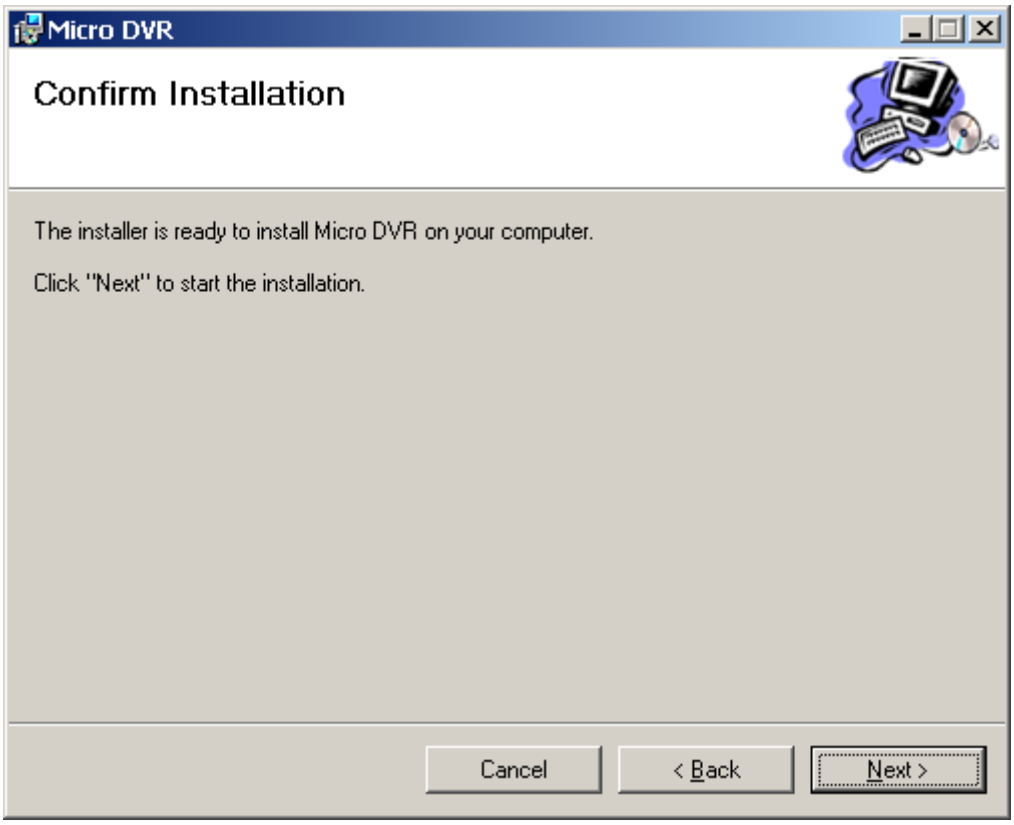


Click **Next >** button to continue installation setup.

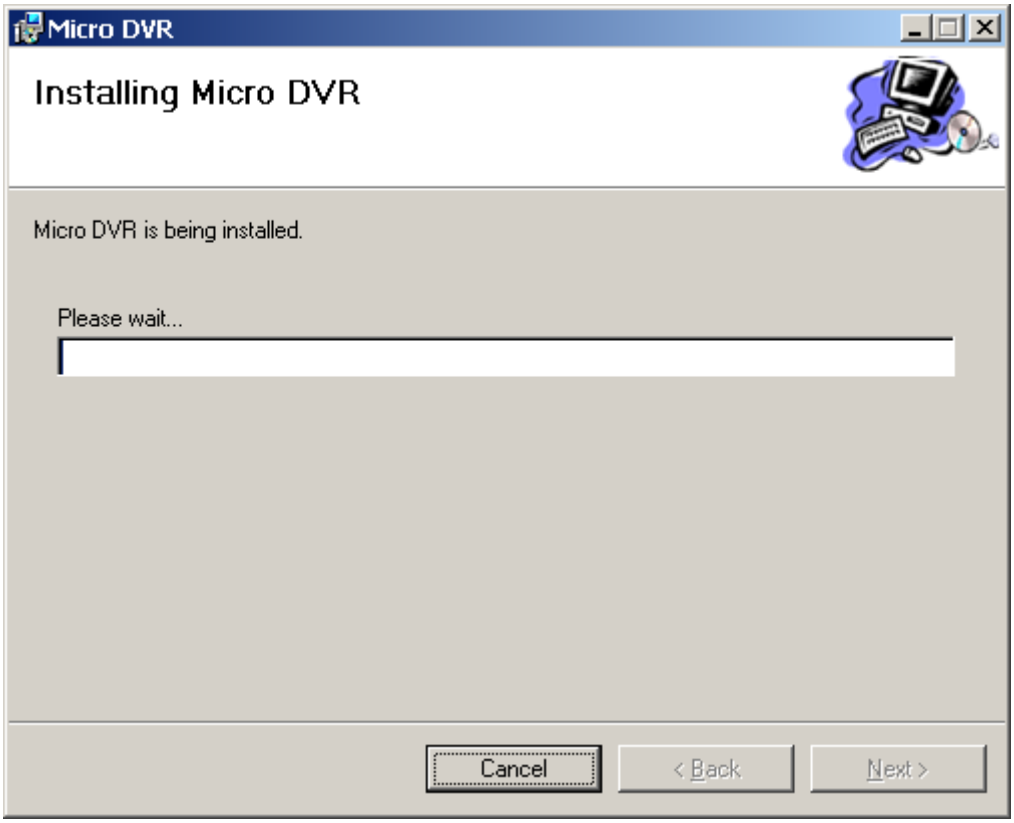
During the installation process, you can select the target folder or use the default folder when software prompts you.



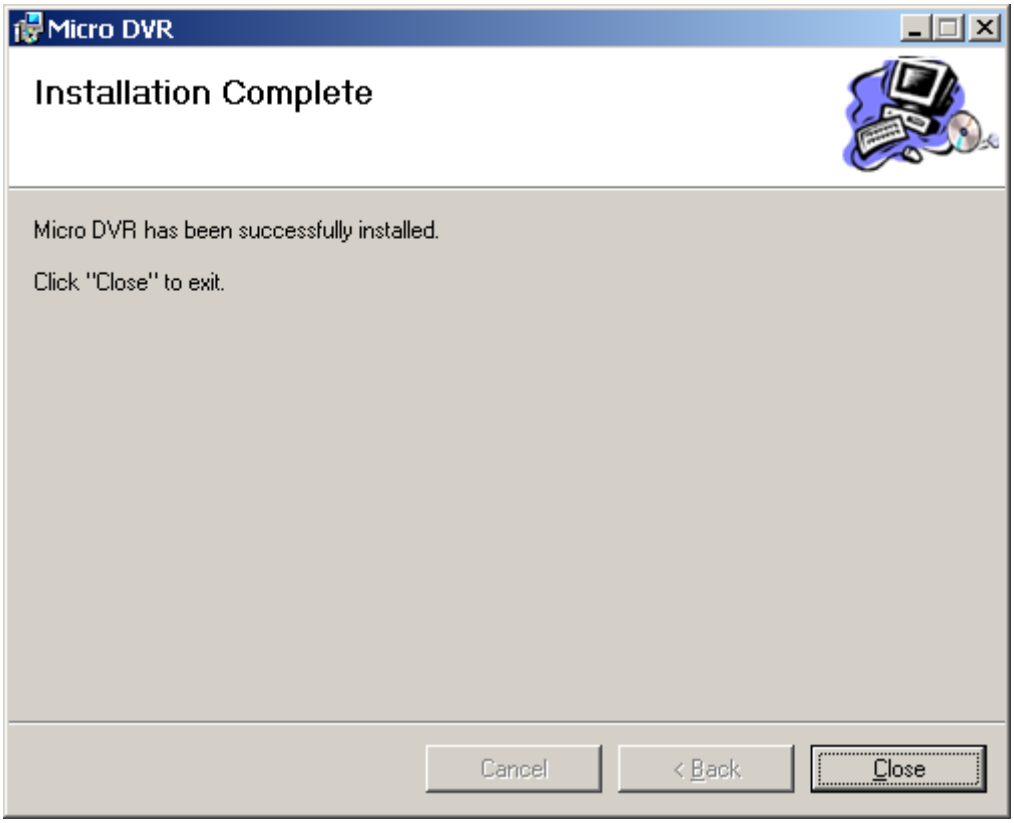
After you select the target folder, Click **Next >** button to confirm it.



Click **Next >** button to start DR3 software install.



Click **Close** button to finish it when installer prompt you the installation is successfully.



After you install the DR3 Desktop, the software shortcut  **DR3 Desktop** will be generated on the desktop and DR3 program folder.

DirectX 9.0c is required to install and run DR3 Desktop.

7. Configure DR3

The DR3-S1s initialized as **DEVICE.INI** under the root directory of the CF card. It must be in the root directory of CF card. The DR3 will use the last time configuration if DEVICE.INI not found during startup.

DR3 Desktop can configure the video format, average bit rate, audio in, TV system, time stamp, Beacon, convert the recording video etc.

7.1 Start-Up DR3 Desktop

DR3 Desktop will detect Network connection between DR3 & PC in first, if Desktop can't detect valid network connection, then it will detect CF card that you want to used in DR3 , please connect CF card to PC via card reader before you start DR3 Desktop if you don't want to connect DR3 to PC via LAN.

The default sequence of DR3 Desktop is detecting valid network connection between DR3 & PC in first, then detect CF card if it can't find any valid net work connection. Certainly, you can change the default detection method in DR3 Desktop software.

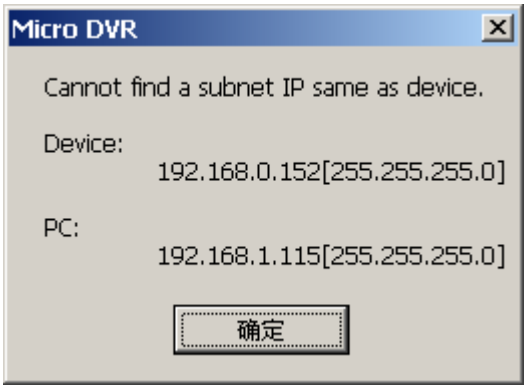
7.1.1 Startup Desktop software via Network Connection

Connect Network Sync cable that in package between DR3 & PC or switch/Router in first, then double click  to start-up DR3 Desktop.

DR3 Desktop will search valid network connection.

After DR3 Desktop detects valid network connection, it wills start-up successfully.

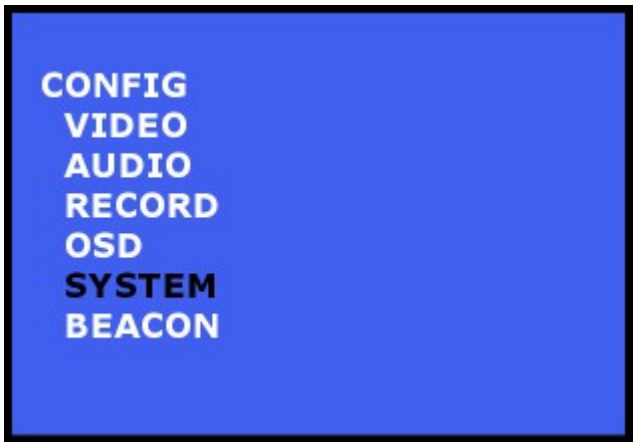
The default IP address of DR3-S1s 192.168.0.152, please ensure your PC on same IP segment for first connection. If yours PC & DR3 with different IP address segment, Desktop software will prompt you.



You can change IP address of your PC to same IP segment with DR3 , such as 192.168.0.100, and then restart Desktop software again.

When you connect DR3 to your PC for the first time, please configure DR3 & PC as follow:

1. Change the your PC IP address to 192.168.0.100
2. Connect DR3 to PC via network connection cable
3. Power on DR3
4. Enter DR3 LCD Menu, select **SYSTEM** menu

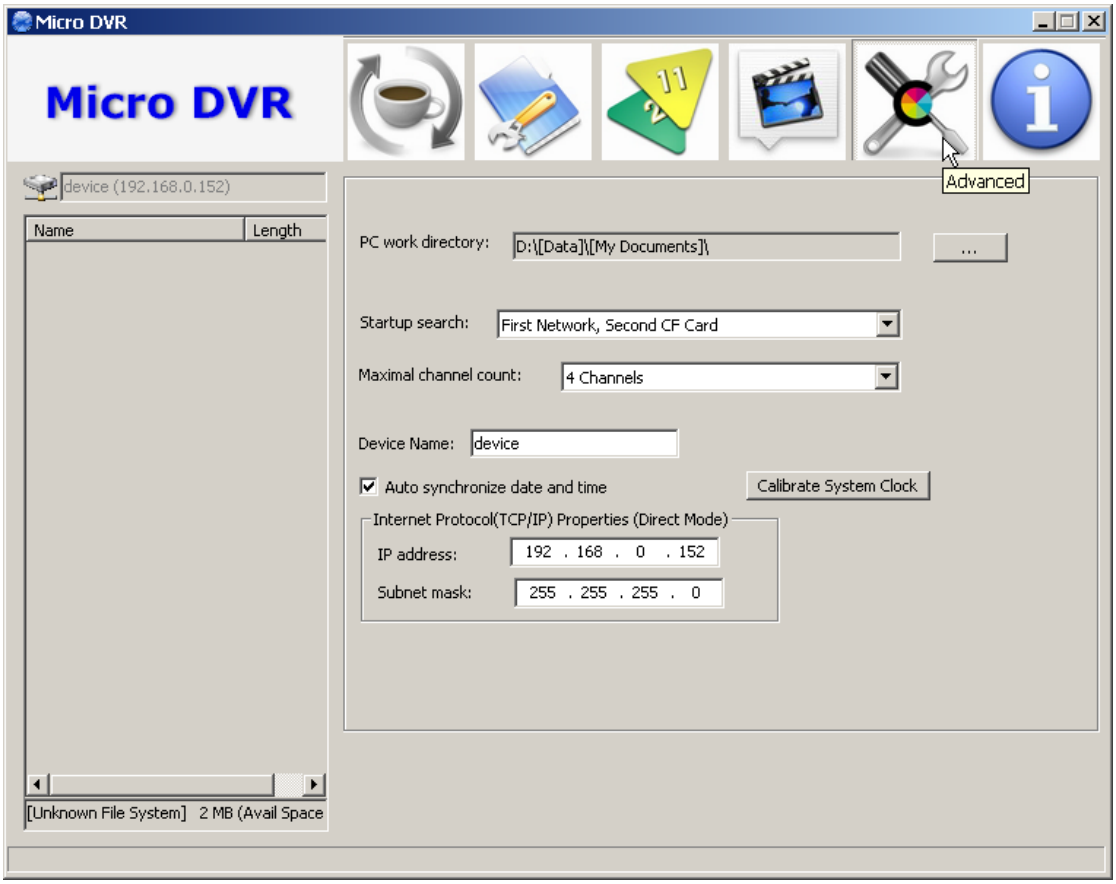


5. Enter SYSTEM menu, then select **NETWORK** item, set DR3 to **DIRECT** connection

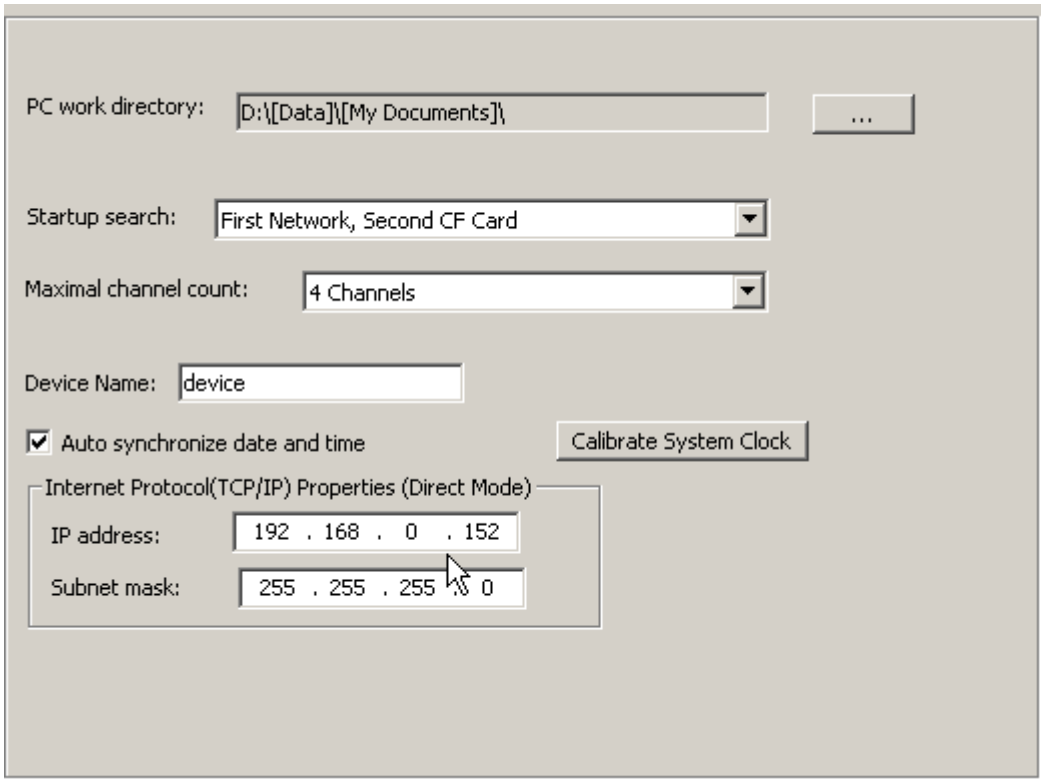
6. Save configuration
7. Start DR3 Desktop software

After you startup Desktop software successfully, you can change IP address of DR3 to same IP segment with your local LAN.

Click **Advanced Configuration** button  to configure network environment of DR3 connection.

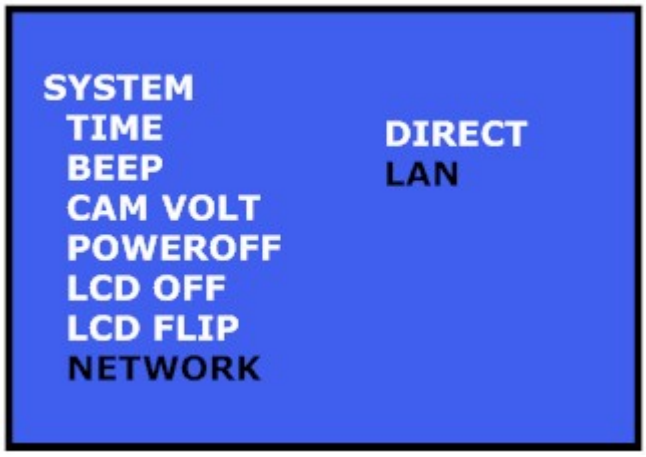


You can change IP address of DR3 manually.



Or you can let DR3 obtain IP address from DHCP server on your local LAN if you connect DR3 to router or switch. But please notice, the router or switch that be connected DR3 must support MDI/MDI-X connection.

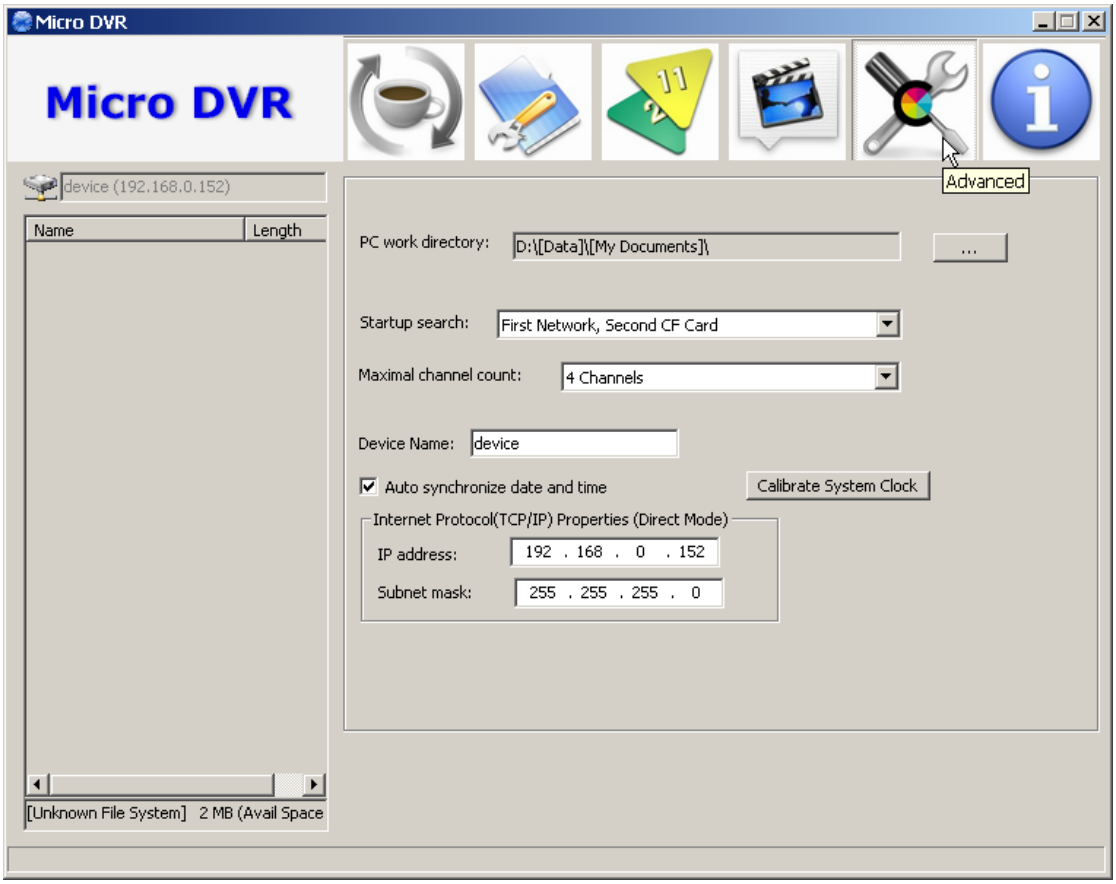
To let DR3 obtain IP address from DHCP server on your local LAN, please set DR3 connection method to LAN.



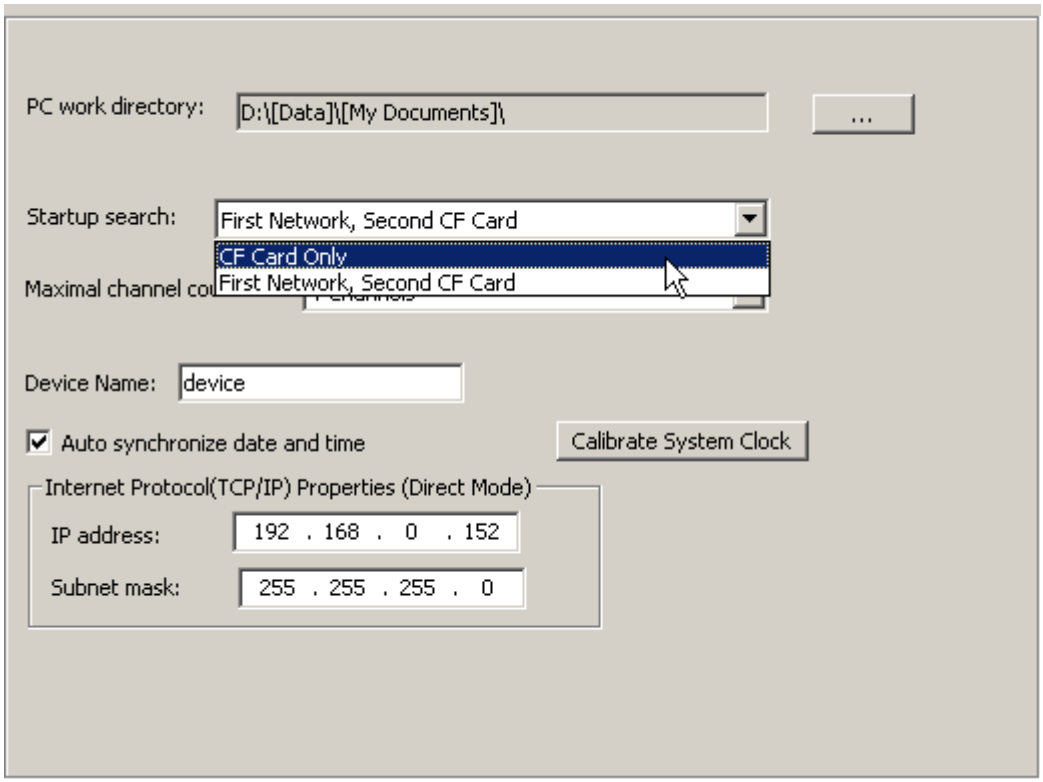
7.1.2 Startup Desktop software via CF card Connection

Change **Startup Search** option from default configuration to **CF Card only**, then you can startup DR3 Desktop via CF card that connect to PC without network connection.

Click **Advanced Configuration** button  to configure connection configuration.



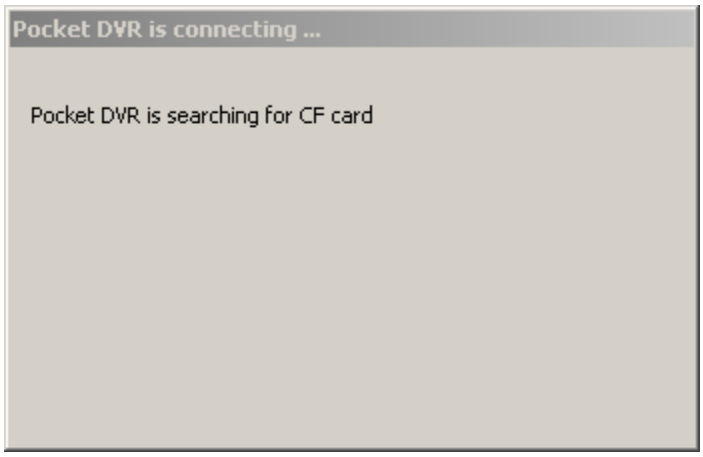
Then set **Startup Search** option to **CF Card Only** item.



After you configure it, you can startup Desktop software only via CF card without network connection for the future.

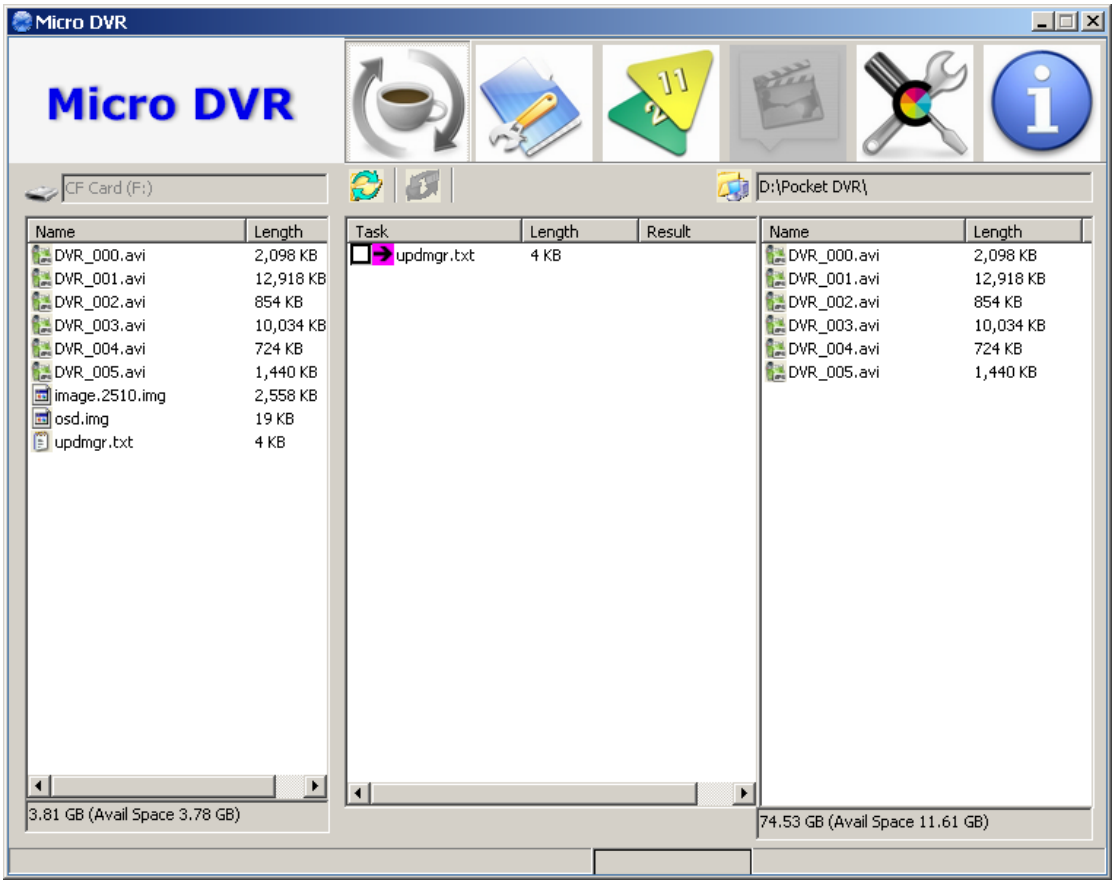
Connect CF card to PC via card reader in first, then double click  to start-up DR3 Desktop.

DR3 Desktop will search CF card on PC.



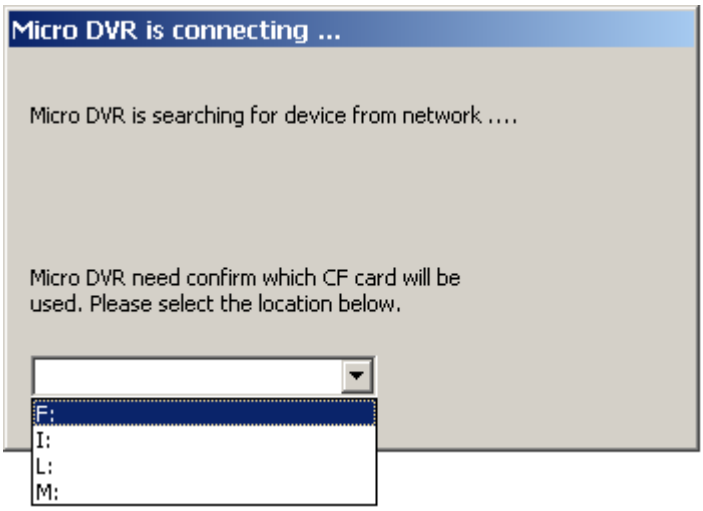
If CF card can't be connected to PC correctly or no CF card be connected to PC, DR3 Desktop will display error message to prompt you connect CF card to PC correctly.

If CF card that you connect to PC had been used in DR3 or be initialized by DR3 Desktop, DR3 Desktop will detect the DEVICE.INI file on the root directly of CF card, and DR3 Desktop will start-up automatically.

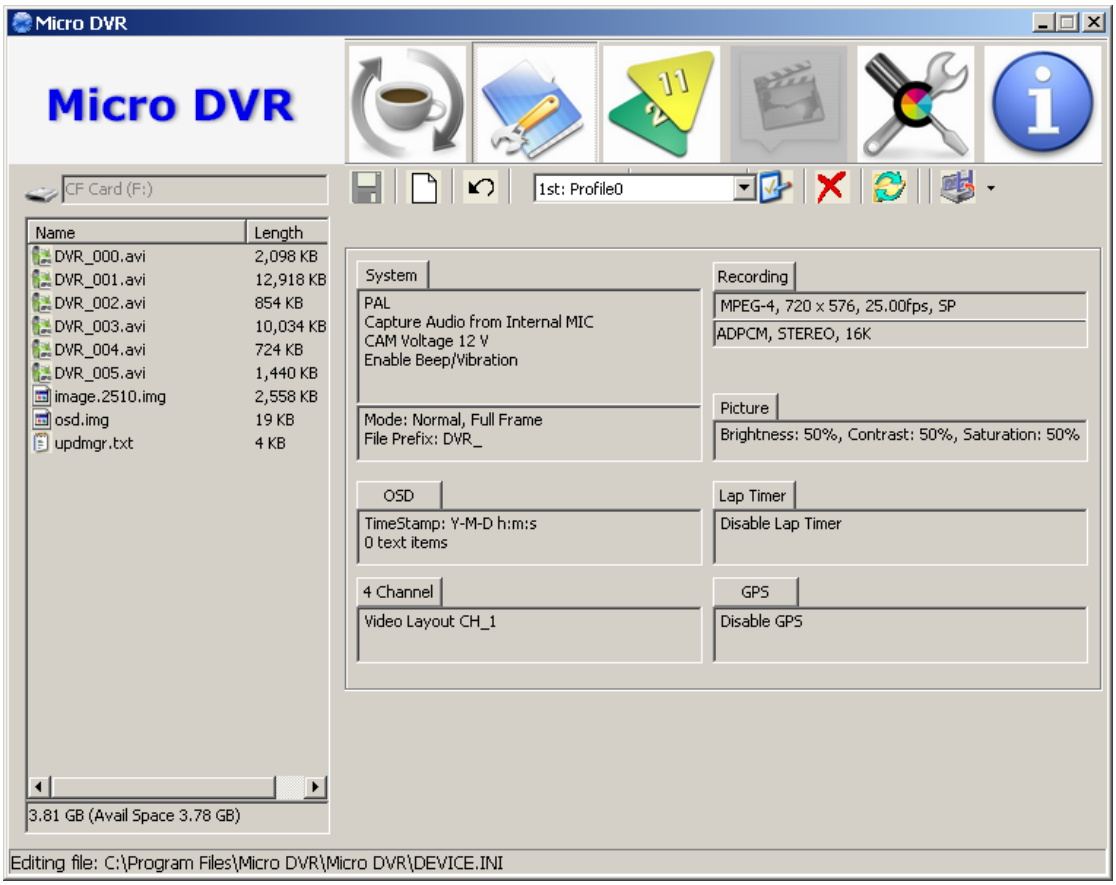


If DR3 Desktop detect a new CF card, system will prompt you select a correctly disk that point to CF card.

After you select correctly disk, DR3 Desktop will initialize CF card and create DEVICE.INI configuration file on root of CF card automatically.

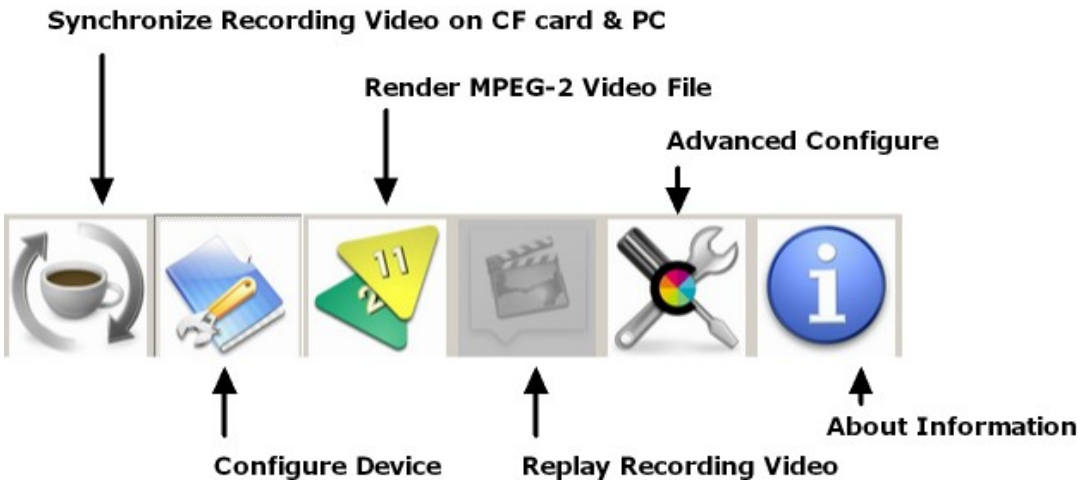


Once DR3 Desktop finished initialization, it wills start-up automatically.



7.2 DR3 Desktop Description

7.2.1 DR3 Desktop Title Bar



DR3 Desktop include six part, you can using DR3 Desktop to configure the video format, average bit rate, audio in, TV system, time stamp, Beacon, convert the recording video etc.

Sync :
Synchronize recording video file on CF card & PC.

Device Configuration :
Configure DR3 device.

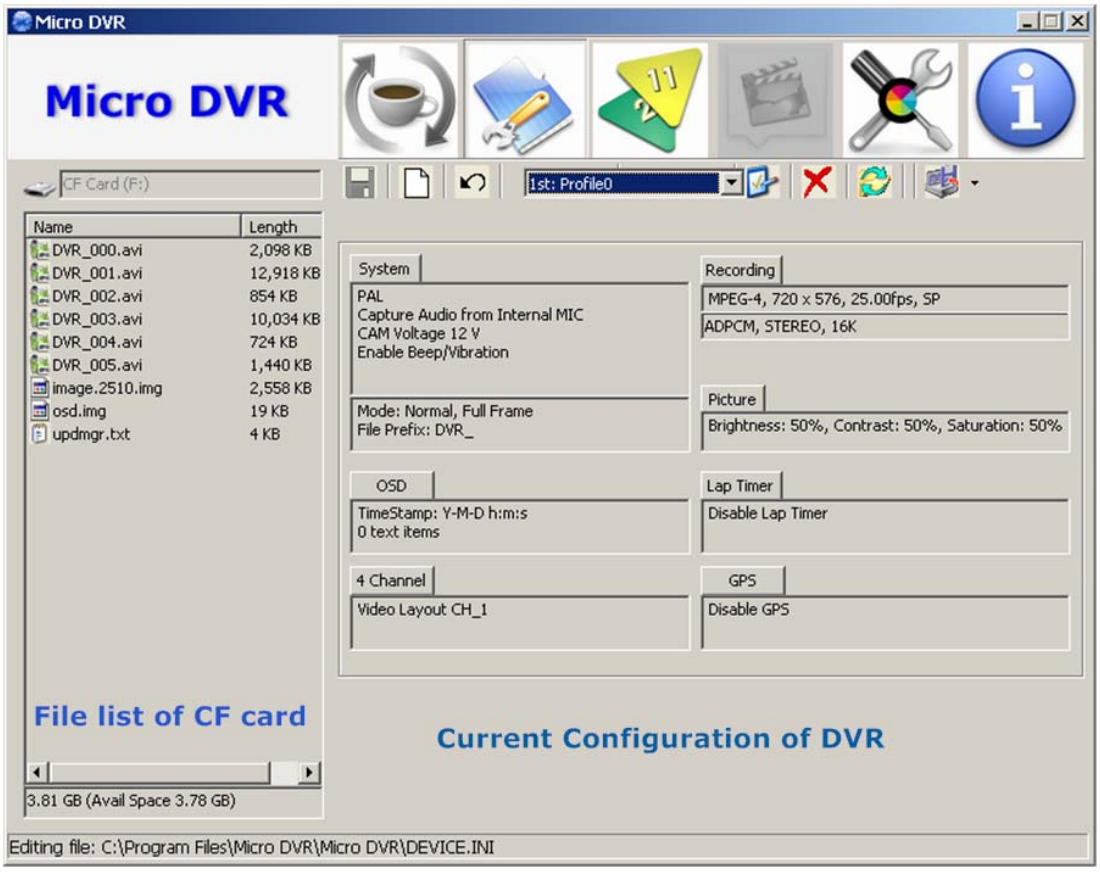
Conversion :
Render MPEG-2 data to standard MPEG-2 video.

Play :
Replay recording video on CF card or PC.

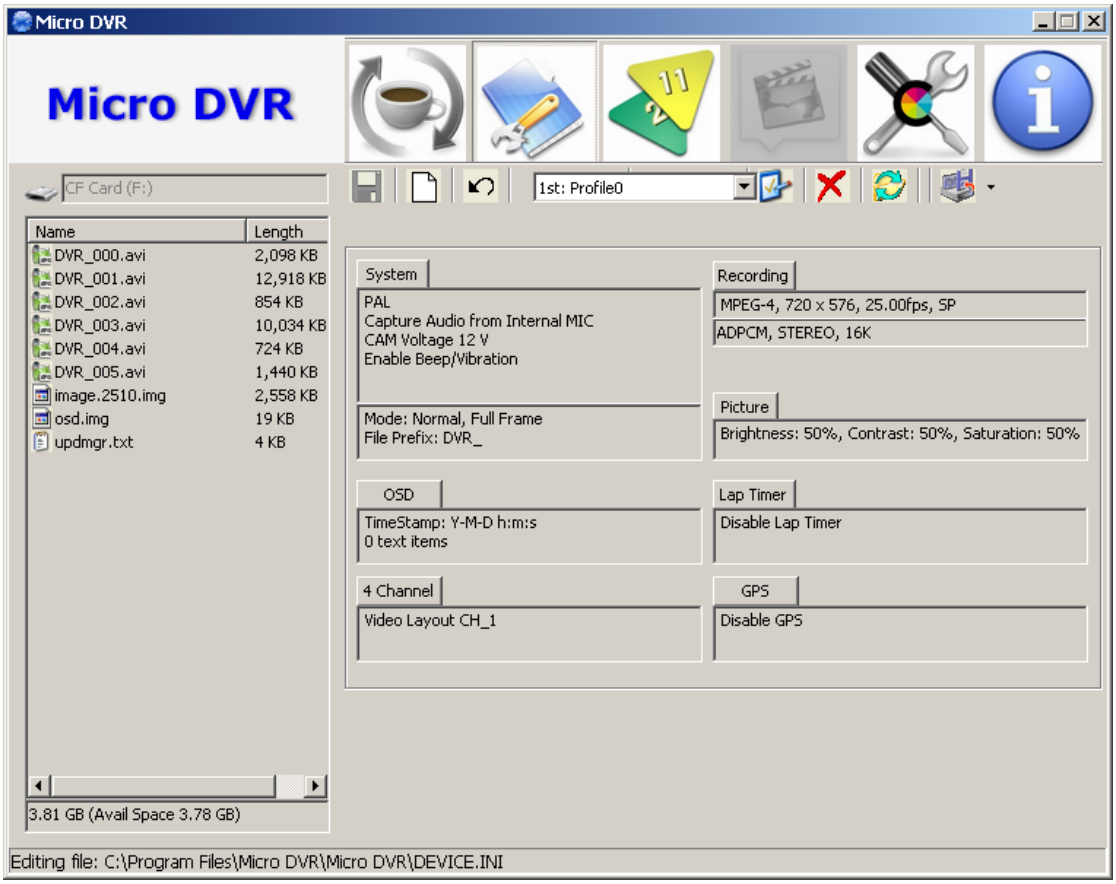
Advanced :
Advanced system configuration.

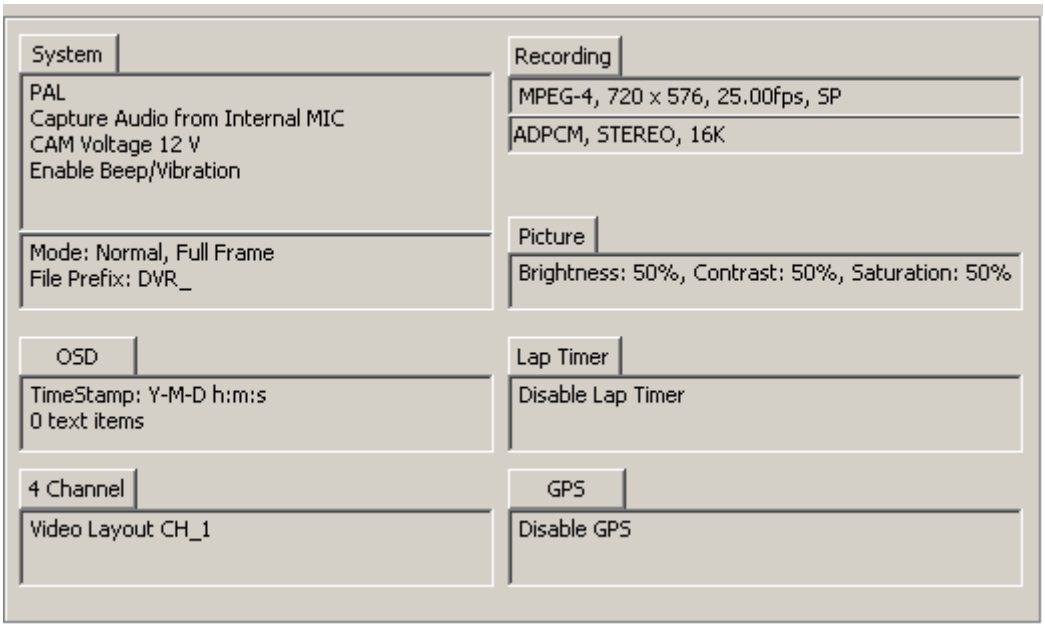
About :
Details information of DR3 Desktop.

7.2.2 DR3 Desktop Interface



Click **Device Configure** button  on the title bar to configure the DR3 .





7.2.3 Save, Cancel & Reset Setting

In all pop configuration menus, you can save, cancel or reset setting to default.

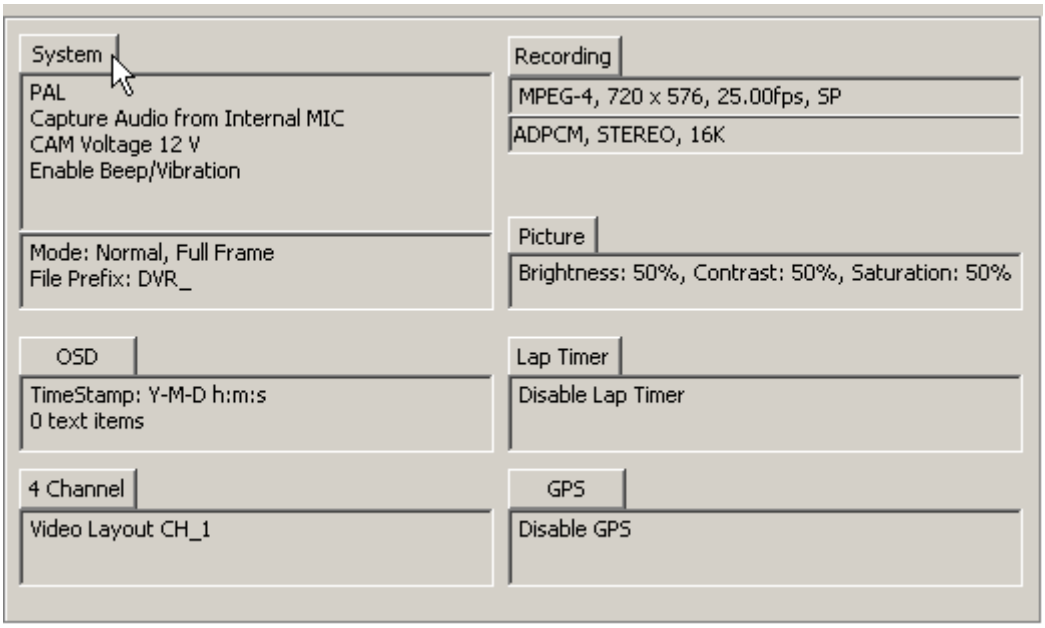
When you finish all setting, you can click **OK** button to save configuration & exit current configuration menu.

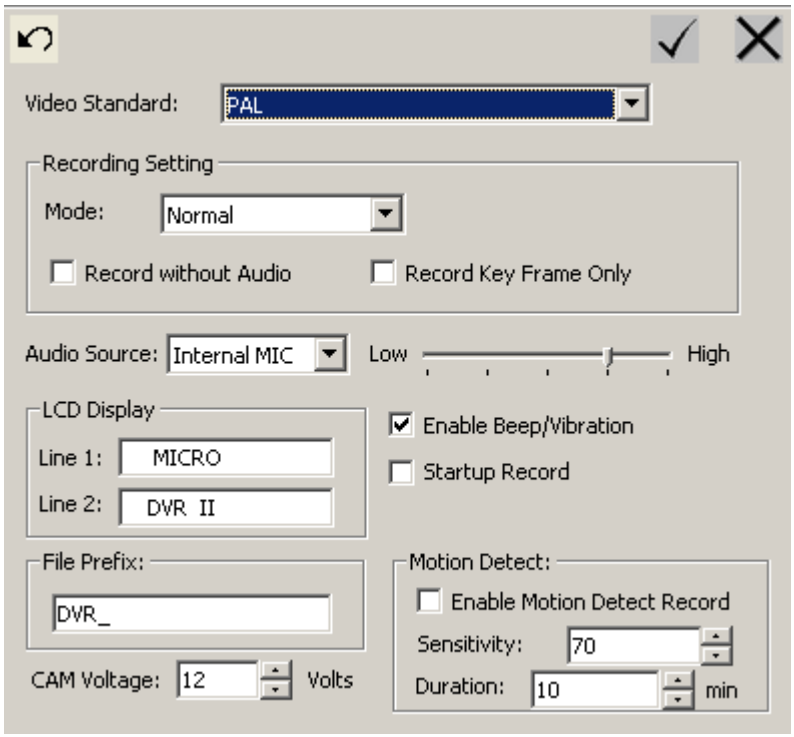
If you want to cancel current modification, please click **Cancel** button to cancel & exit current configuration menu.

If the configuration had been jumbled, you can click **Reset** button to restore configuration to default setting.

7.3 Device Configuration

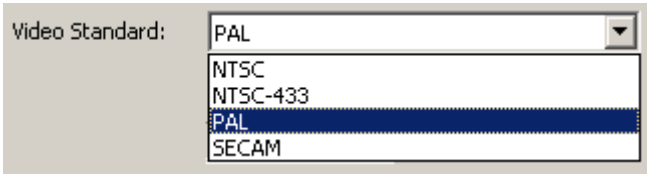
Click **System** tab to configure DR3 .





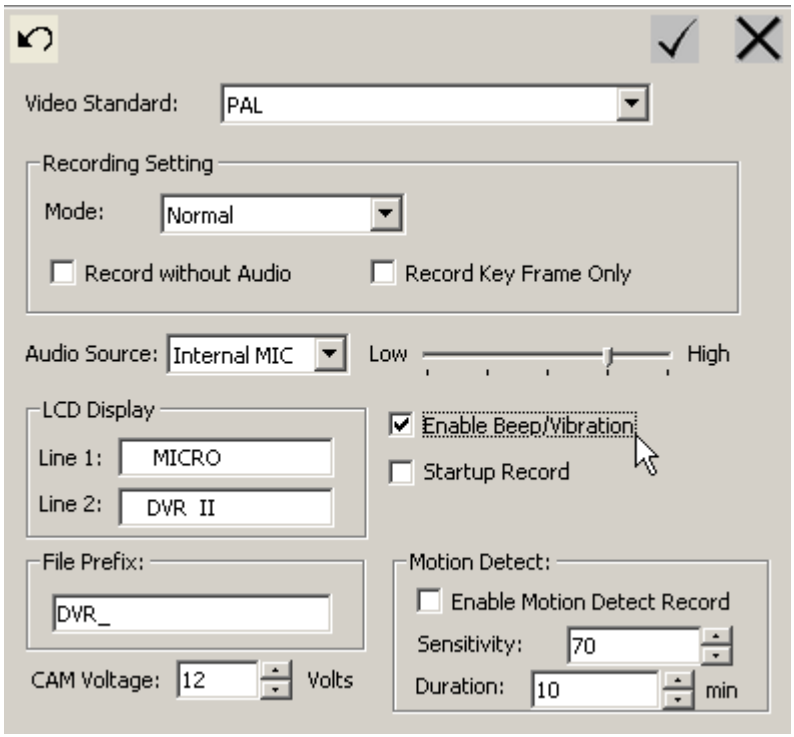
7.3.1 Video System

Please select correct video standard which corresponding to the video source of camera. Default video standard is now PAL. It has to be changed for other video standard.

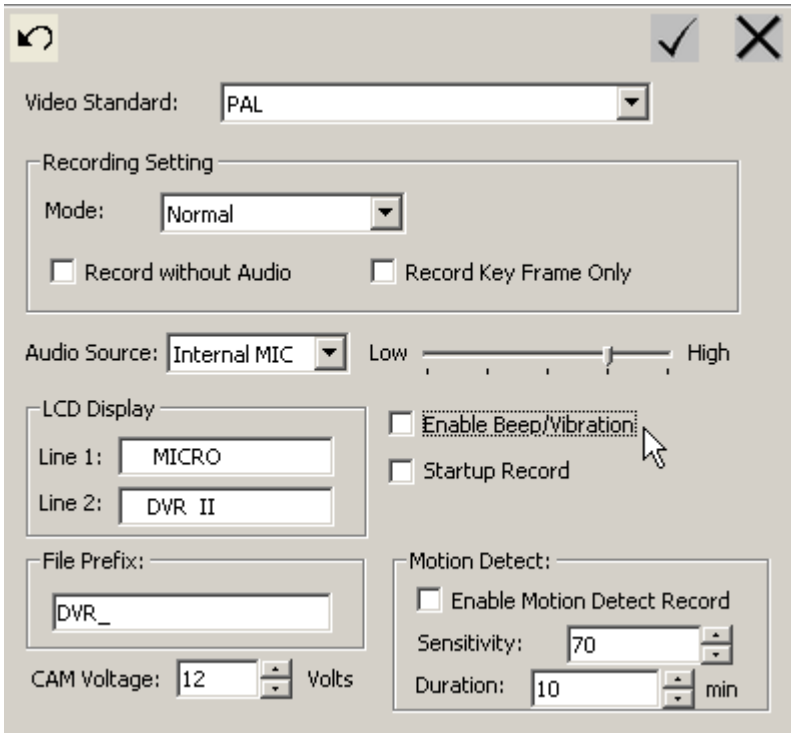


7.3.2 Beep/Vibration

DR3 will beep or vibrate to warn you when it starts or stops recording, in some special applications or occasion/environment, you may want to turn this function off, and you can disable beep/vibration function.



The default configuration is **Enable Beep/Vibration** function; you can disable it in DR3 Desktop.

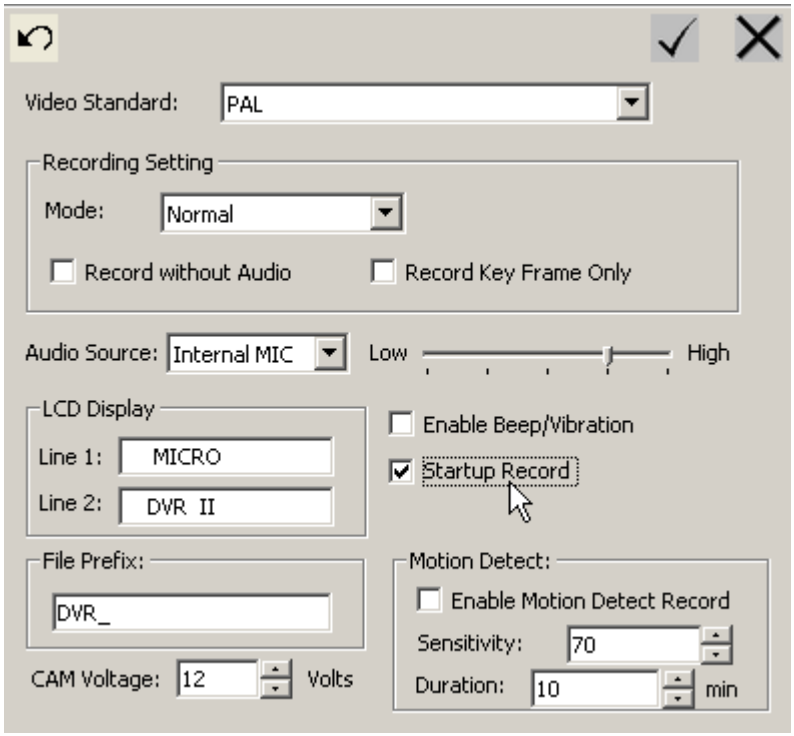


Switch off **Enable Beep/Vibration** options in DR3 Desktop to disable it, now you can operate DR3-S1n silent mode.

7.3.3 Record on Power On

In some applications, you may need the DR3 to record automatically once the DR3-S1s powered on.

You can switch on the **Record on PowerOn** option in the DR3 Configuration Menu or enable **Startup Record** option on DR3 Desktop.



The default status of record is manual record via IR remote control, LANC remote control or push button.

7.3.4 Recording Setting: Normal/Cycle Record, Key Frame & Record without Audio

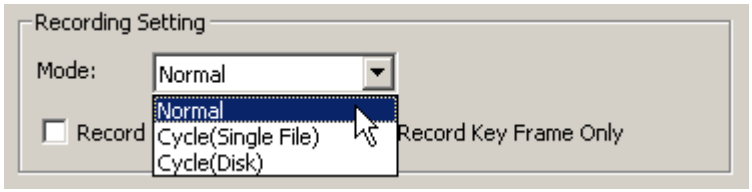
You can configure the DR3-S1n normal record or cycle record mode.

7.3.4.1. Normal Record Mode

In normal record mode, DR3 will record video & save recording video in multi-single video file, the maximum size of single recording video file is 2GB depend on limit of system.

The default of record mode is **Normal Mode**.

You can select Normal Record Mode option to enable normal record mode if current configuration is cycle item.



If you want to use DR3-S1n a surveillance application, you can set the **Record Mode** to Cycle Record mode.

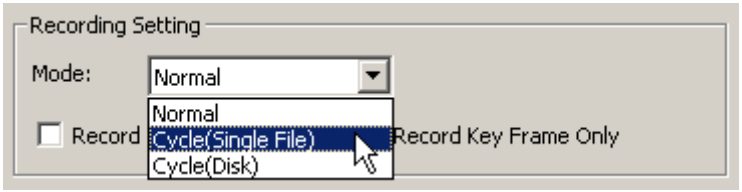
7.3.4.2. Single File Cycle Record Mode

The DR3 has two cycle record modes, Single File Cycle Record & Full Disk Cycle Record mode.

In Single File Cycle Record mode, the DR3 will save recordings in single file only, the maximum size of single recording video file is 2GB, when video reaches the 2GB limit, the system will save the new recordings from the begin of recording video file.

If your CF card is smaller than 2GB, the DR3 will save recording video in single file only, when CF card is full, system will save the new recorded video from the beginning of the recorded video file.

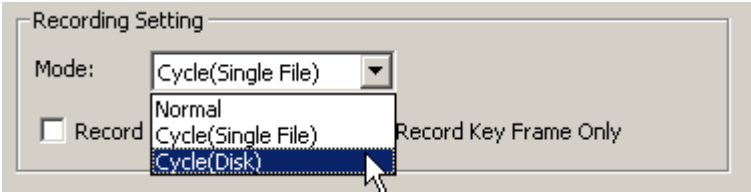
You can select Cycle (Single File) item in **Record Mode** option to enable Single File Cycle Record mode.



7.3.4.3. Full Disk Cycle Record Mode

In Full Disk Cycle Record mode, the DR3 will record continually, when the CF card is full, the DR3 will record the video overwriting the oldest recorded file.

You can select Cycle (Disk) item in **Record Mode** option to enable Full Disk Cycle Record mode.



If you set the DR3-S1n cycle record mode, all old recorded video file on the CF card will be deleted on system startup.

7.3.4.4. Only Record Key Frame

If you want to record video in surveillance application, you can record key frame only to decrease the size of recording video & increase recording time for a same CF card.

In this option, DR3 will record one frame per 15fps. In PAL video standard, approx 3 frame per 2 second be saved; in NTSC video standard, approx 2 frame per second be saved.

If you select this option, system will save video only and that the sound will be forsaken.

NOTE: The option is only for MPEG-4.

7.3.4.5. Record Video without Audio

Sometimes, your application needn't audio in recording video, you can don't record any audio when you record video, it will save space ob CF card to save more recording video.

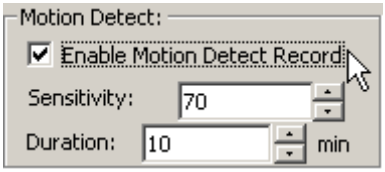
The default setting will include audio in recording video, to not include audio in recording video, you need pitch on the option.

If you select Record without Audio option, the MPEG-2 recording video will be saved as standard .mpg file that needn't conversion.

NOTE: The UQ Video Quality not includes audio for ever.

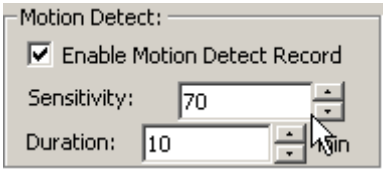
7.3.5 Motion Detection

When you use DR3 on surveillance application, such as security surveillance, scout, wildlife protect & observe etc, you need record all useful video over a long time range on a CF card, you must forsake useless resting video to save storage space on CF card. You can enable Motion Detection function to get it.



The default configuration of Motion detection is disabling, you need enable it if you want to use this function.

To avoid unconcerned locomotors object to active Motion Detection, you can set Sensitivity of Motion Detection, the value means the size proportion of locomotors object than fully screen area.

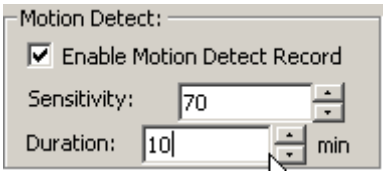


You can estimate the size proportion of object that you want to catch, at once DR3 detect a locomotors object that match sensitivity value that you setting, it will begin to record video automatically until duration time that you setting is finished.

The default value of Sensitivity is 70% of full recording video screen area.

DR3 will recording continuously until duration time is finished when Motion Detection recording be actives. You can change Duration time depend on your requirement to record all useful video or save more storage space on CF card.

The default value of duration time is 10 minutes.



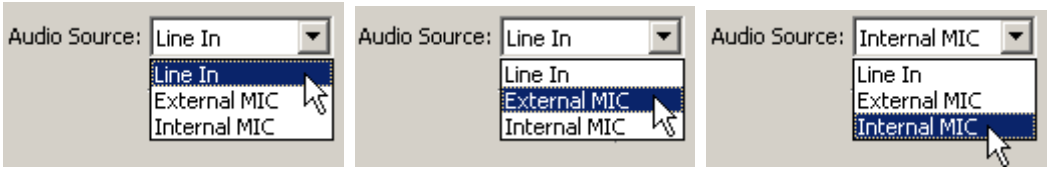
DR3 will start recording at once Motion Detection be actives, it will stop recording when duration time is finished, if DR3 detect other suited locomotors object in duration time, the duration time will be postponed based on the last suited object.

Actual duration time is always timed based on the last suited locomotors object that be detected by DR3 .

Motion Detection function is only for MPEG-4 format.

7.3.6 Audio Source

Please select the correct audio in setting which is based on your actual audio input. Default audio source is **Line In**, you need to select **External MIC** if you use an external microphone, or you can select **Internal MIC** item if you use the internal microphone in DR3 .

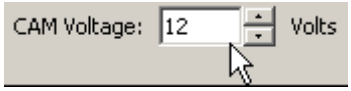


The **External MIC** & **Internal MIC** option will increase gain of volume.

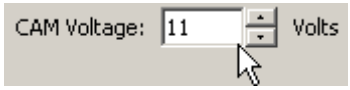
For all audio input, you can adjust gain of source input between five levels.

7.3.7 Output Voltage

DR3 can power external device via power output adapter on IRIS-RCA jump cable, you can power external bullet camera or external LCD monitor, you can adjust output voltage from 6V to 12V.



If you want to power external bullet cameras more than one, please set the output voltage lower than 11V, and you need connect AC power adapter for DR3 .

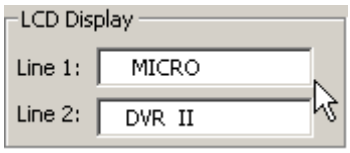


7.3.8 LCD Display

You can customize the LCD message.

The maximum character of characters of every line is 8 for DR3 I; you can use printable characters only & exclude the character "~".

For DR3-X1 & 2/3/4CH DR3, because it include built-in large TFT screen, so you can set product name to 30 characters, 15 characters per line, and two lines.



You can use printable characters only & exclude the character "~".

7.3.9 Video File Name

Recording video file name starts with DVR_ by default. DR3 can support two filename formats.

7.3.9.1. Standard Filename

The file name will be **DVR_xxx.avi**. XXX is incremental from 000 to 999. The prefix DVR_ can be modified in DR3 Desktop software.

7.3.9.2. Extended Filename

Under extended filename, you can name recording video using time that you record & frames of recording video, the details of extended filename as follow:

DVR_20_34_12_05.mpg

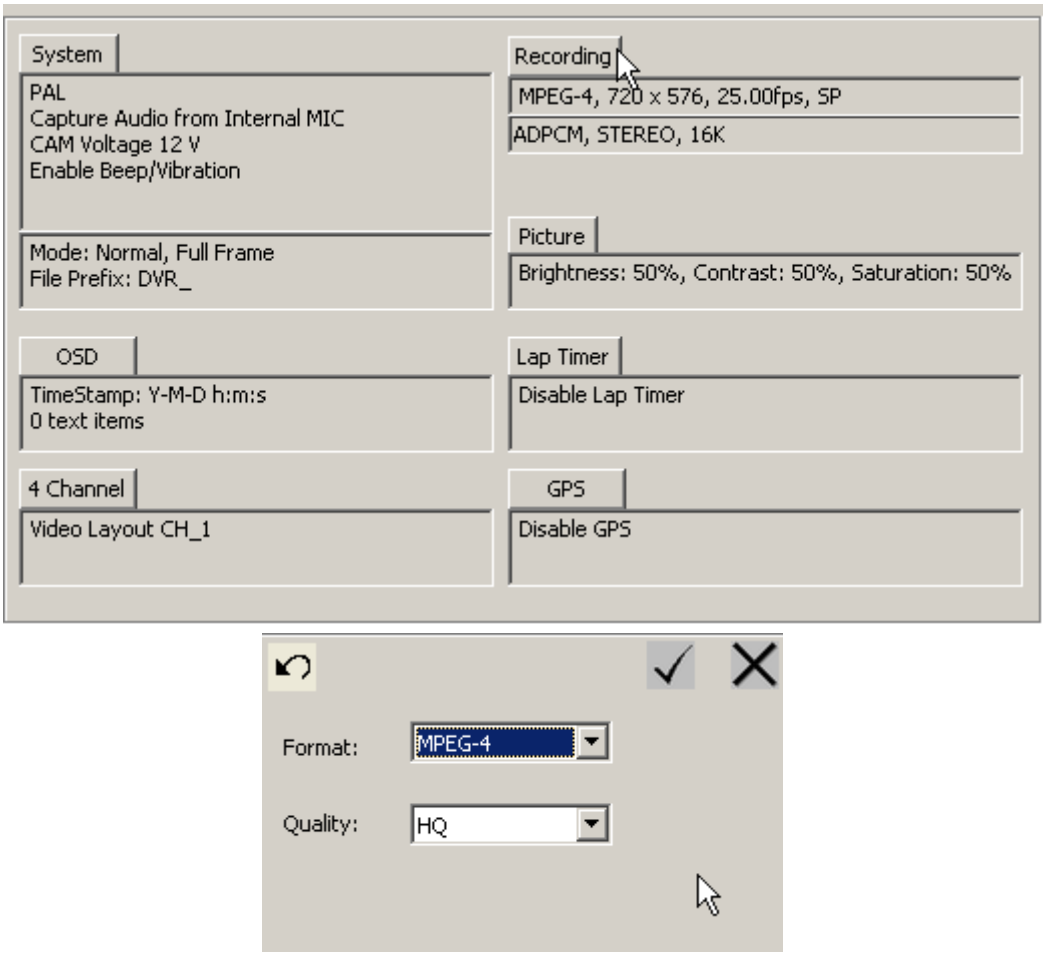
DVR = unique ID set by system.ini
20 = hours (24 hour clock)
34 = minutes
12 = seconds
25 = frame number

To change filename of video to extended format, you can set it in DR3 LCD menu, enter menu, select RECORD item, then select FILENAME sub-item, then change filename from Standard to Extended format.

For details of change filename, please refer **Chapter 12 : Configure DR3 using LCD Menu**.

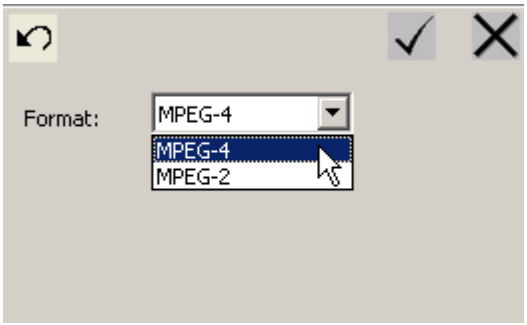
7.4 Recording Format & Quality

Click **Recording** tab to configure recording format & quality.



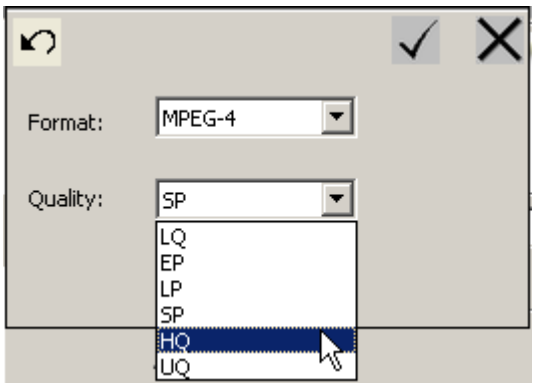
7.4.1 Video Format

Select **MPEG-2** or **MPEG-4** format for your recording video.



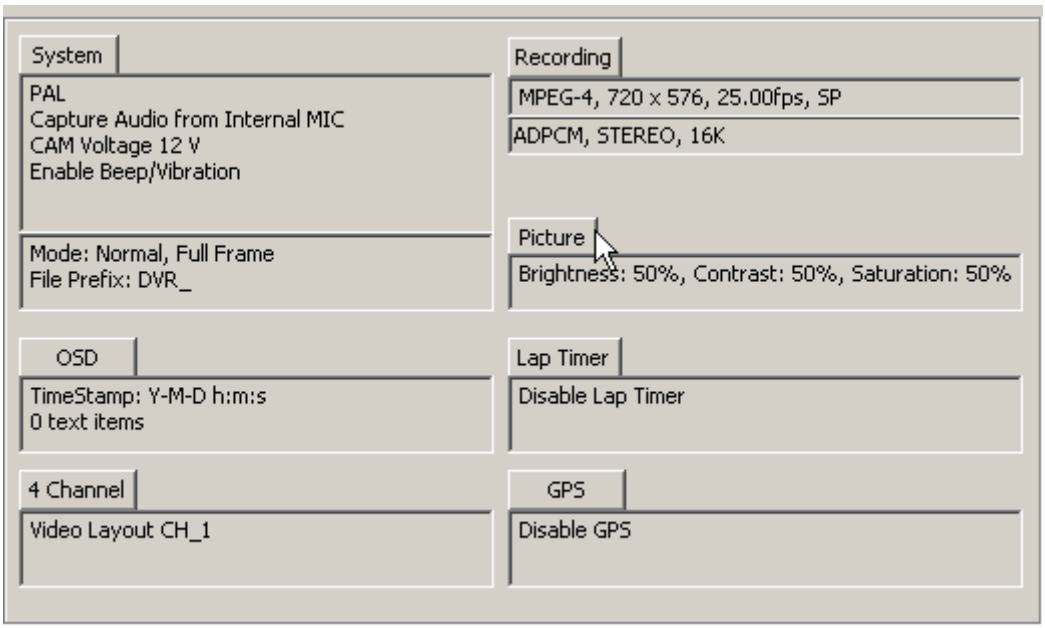
7.4.2 Video Quality

Select proper video quality based on the scene and required. Please refer to Video Quality section.

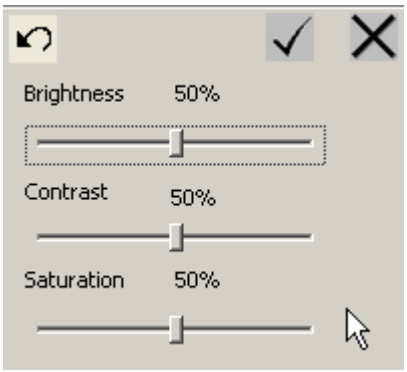


7.5 Picture Adjust

Click **Picture** tab to adjust picture of recording quality.

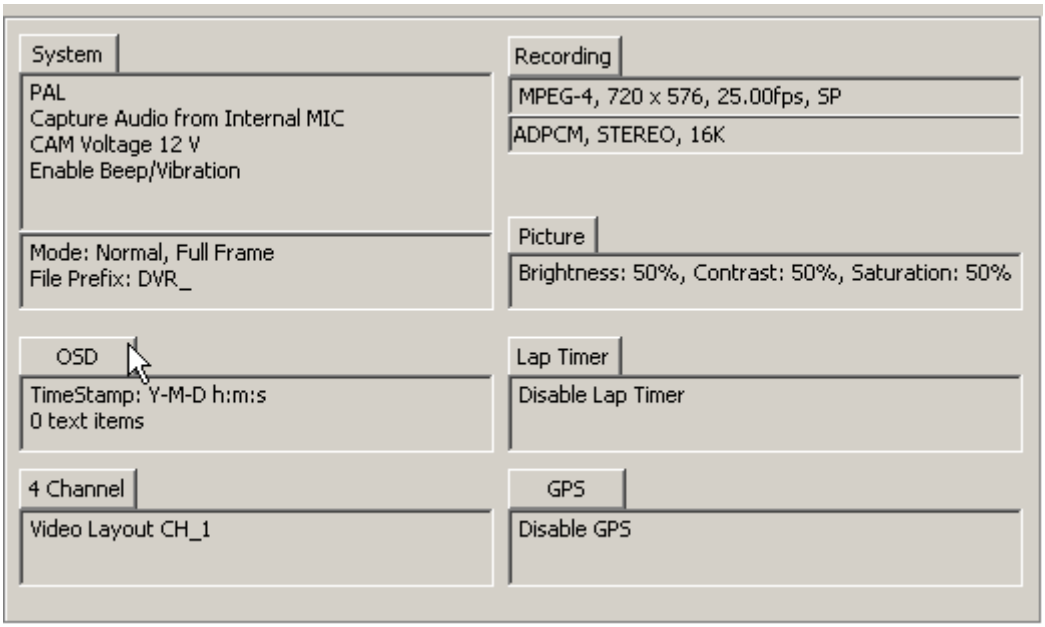


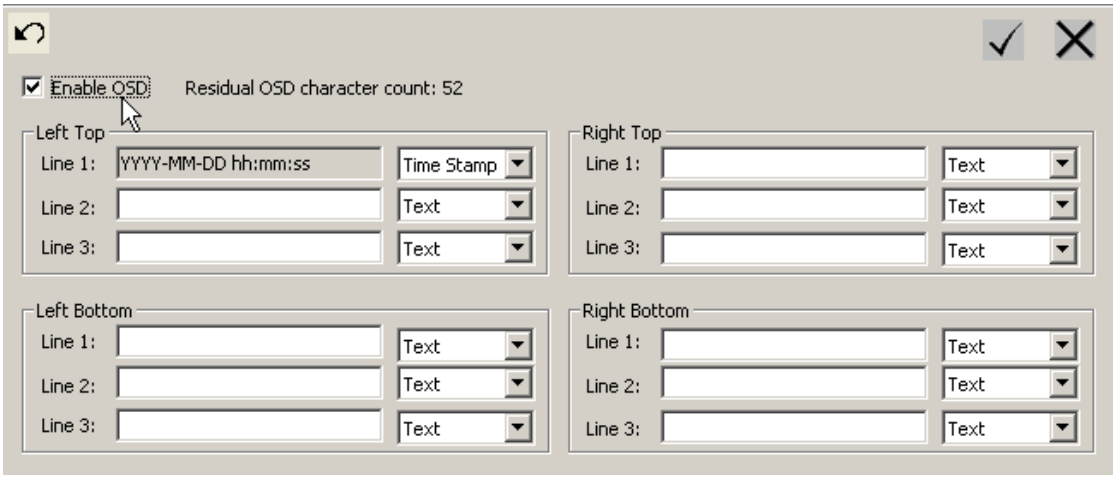
You can adjust the brightness, contrast & saturation of the picture to get the best quality. The default value is 50%.



7.6 OSD Configuration

Click **OSD** tab to configure Time Stamp & OSD information.





You can display Time Stamp & customized OSD information on recording video screen.

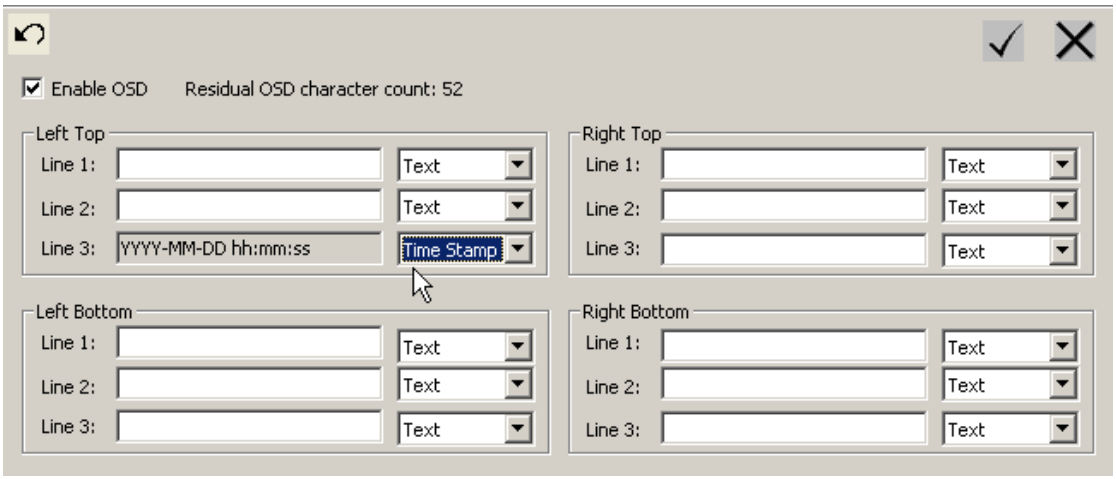
At once we enable OSD, the Time Stamp & special OSD information that you input will display on screen & recording video.

7.6.1 Time Stamp

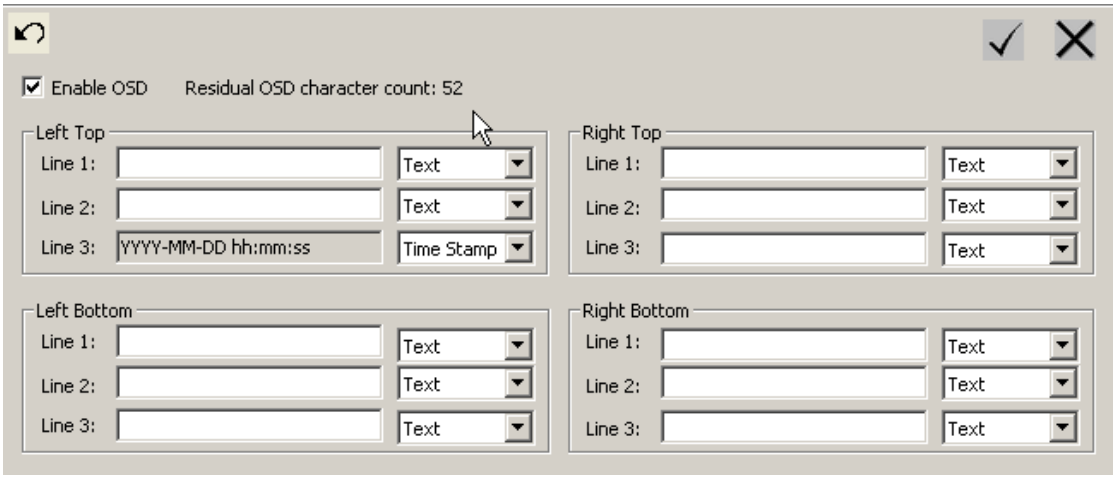
You can display date & time stamp or other text OSD information on screen of recording video.

You can place date & time stamp on four area of screen: Left Top, Right Top, and Left Bottom & Right Bottom.

You can display date & time stamp on only one location, at once you select position for date & time stamp, and you can display text OSD information on other valid position only.



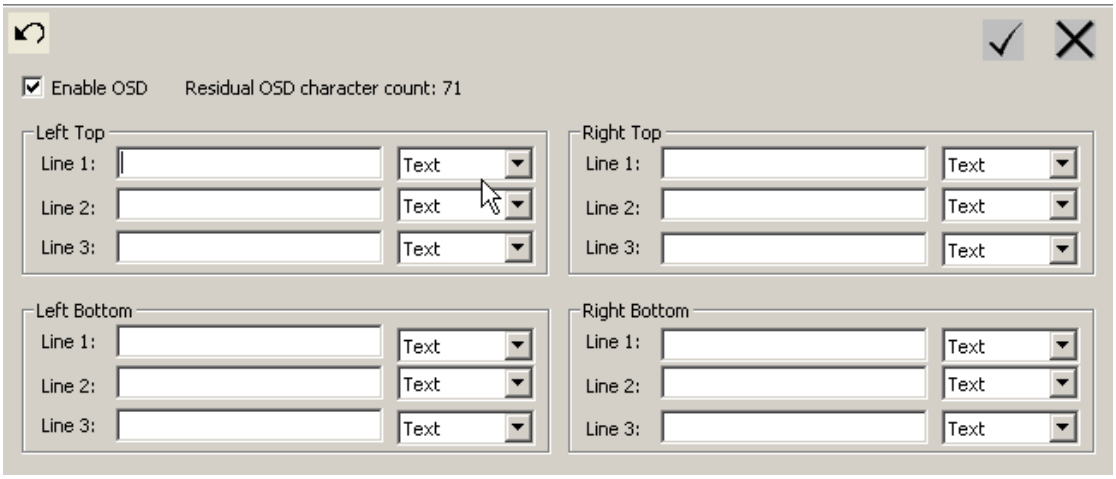
After you set date & time stamp, you can input max 52 characters for other OSD text information.



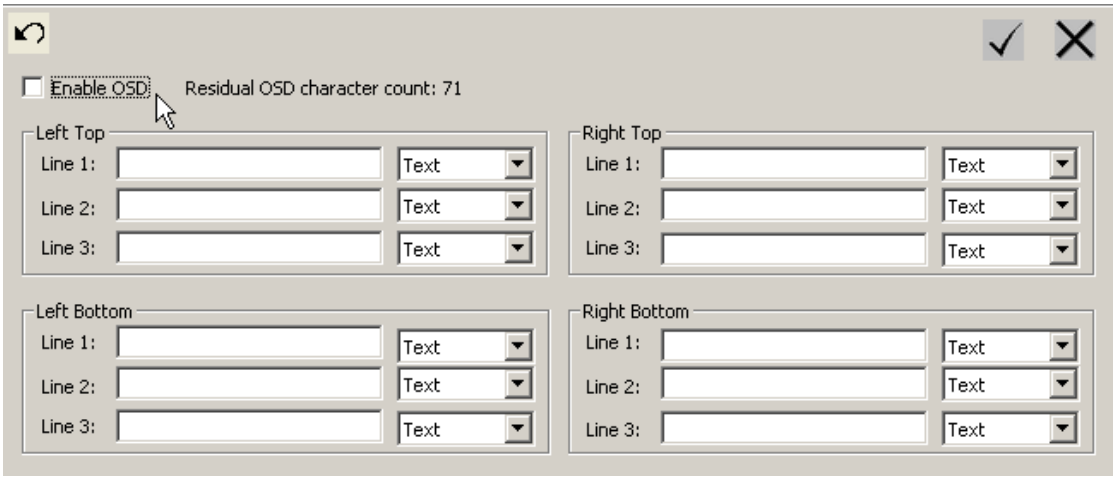
7.6.2 Text OSD Information

Certainly, you can disable Time Stamp features if you want to display customized text OSD information in your recordings only & without date & time stamp.

Set all valid OSD position to text format to disable date & time stamp display.



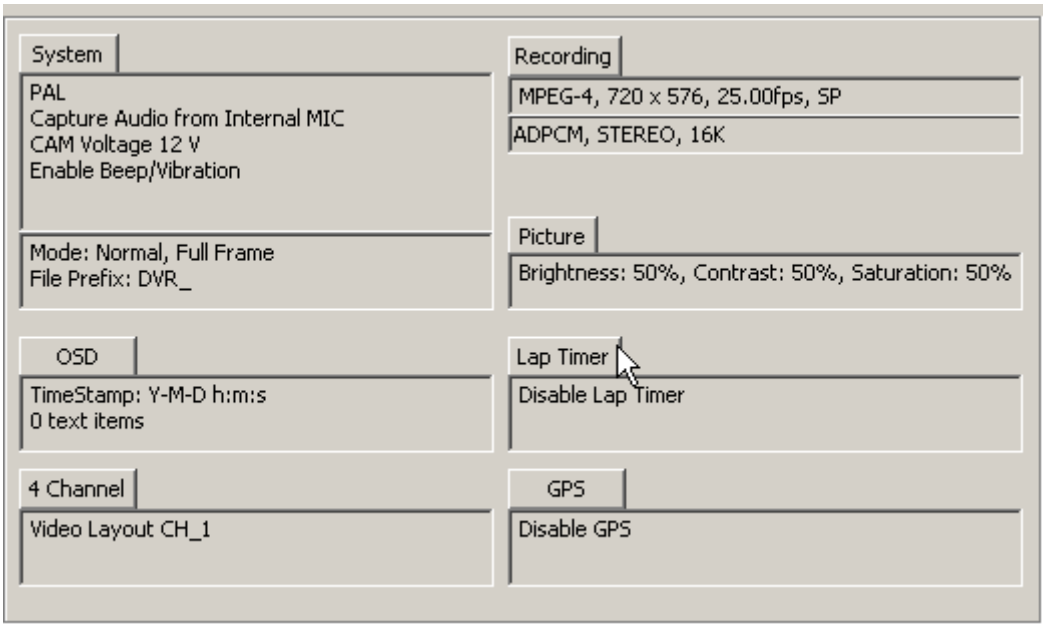
At once you don't active **Enable OSD** option, Time Stamp & all customized text OSD information will disappear on screen & recording video.

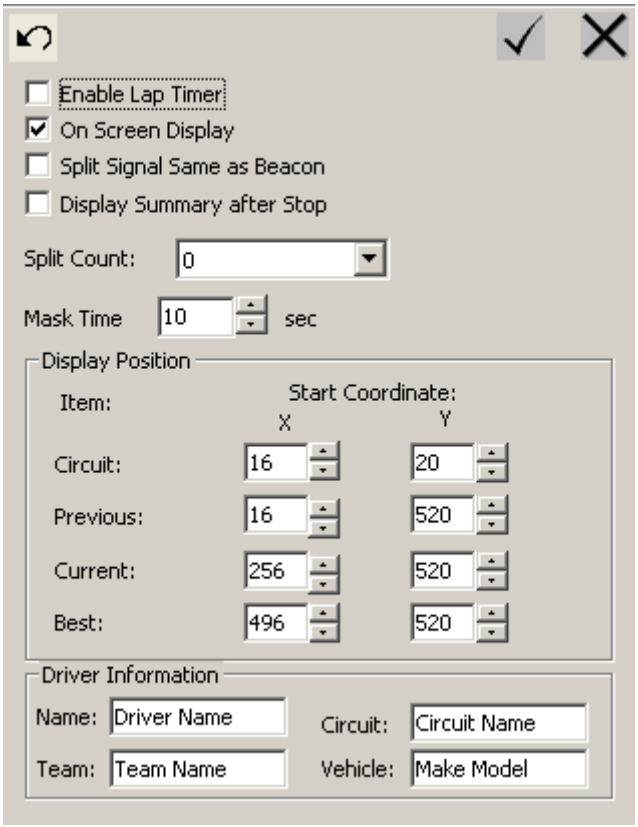


In DR3 , priority of Beacon is higher than Time Stamp; the Time Stamp will be disabling at once when the Beacon is enabling.

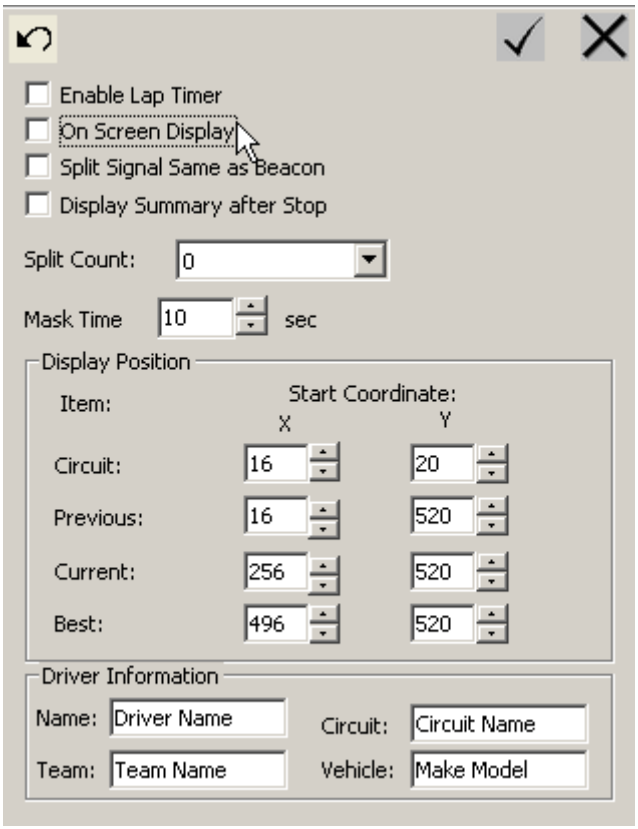
7.7 Configuration of Lap Timer

Click **Lap Timer** tab to configure Lap Timer.



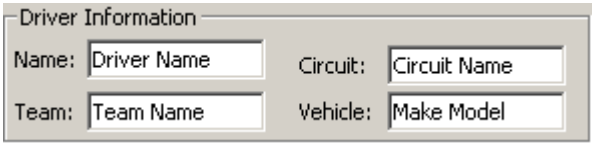


At once you enable Lap Timer function on DR3 /w Lap Timer edition, the Lap Timer data will be recorded on recording video & separate text data file, always, but you can select display it on screen of recording video, please disable **On Screen Display** option.



7.7.1 Set Driver Information

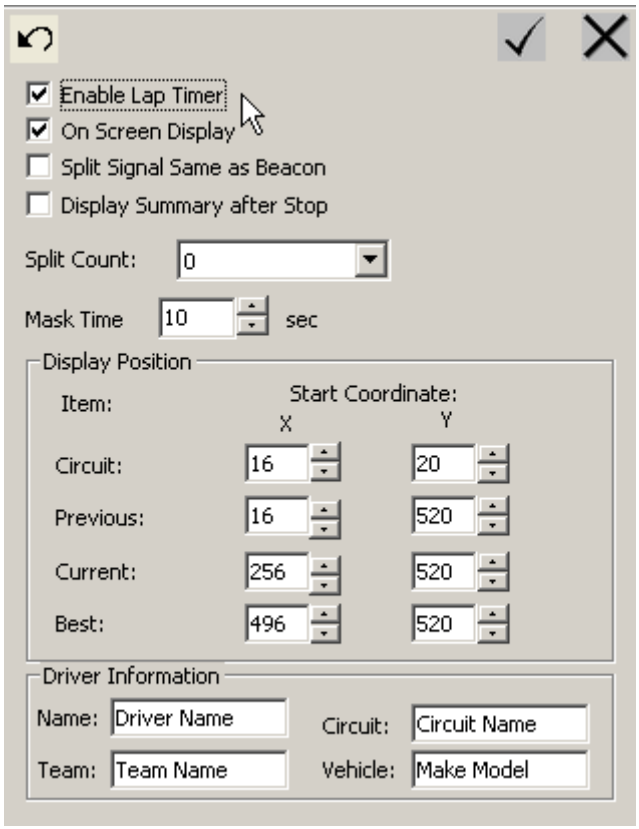
After enable Lap Timer function, you can record driver name, team, and circuit for racing, make & model of vehicle in racing on screen of recording video.



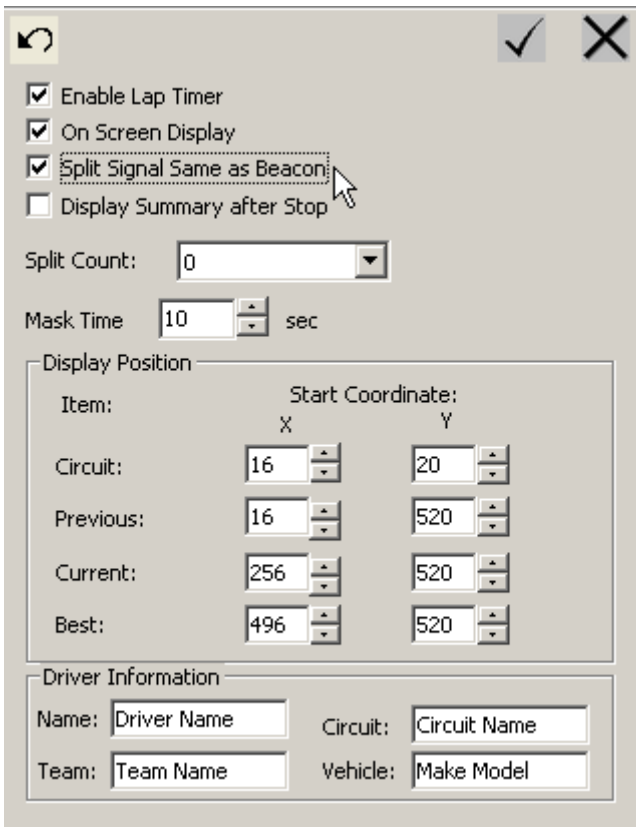
You can modify these informations based on actual details information.

7.7.2 Beacon & Split Beacon

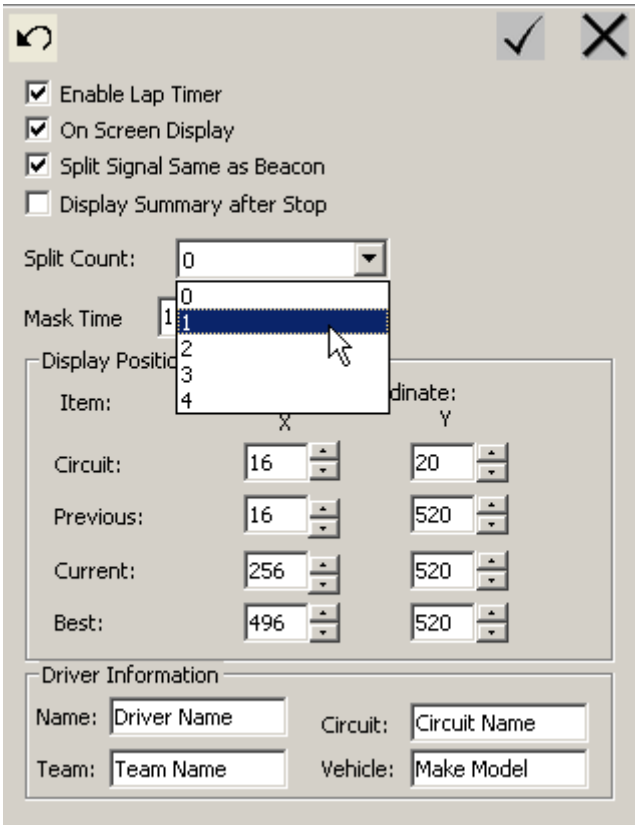
Set **Beacon Enable** to receive Beacon signal. The default is disabling.



If you use Split Beacon on racing, you must switch **Split Signal Same as Beacon** option to enable it.

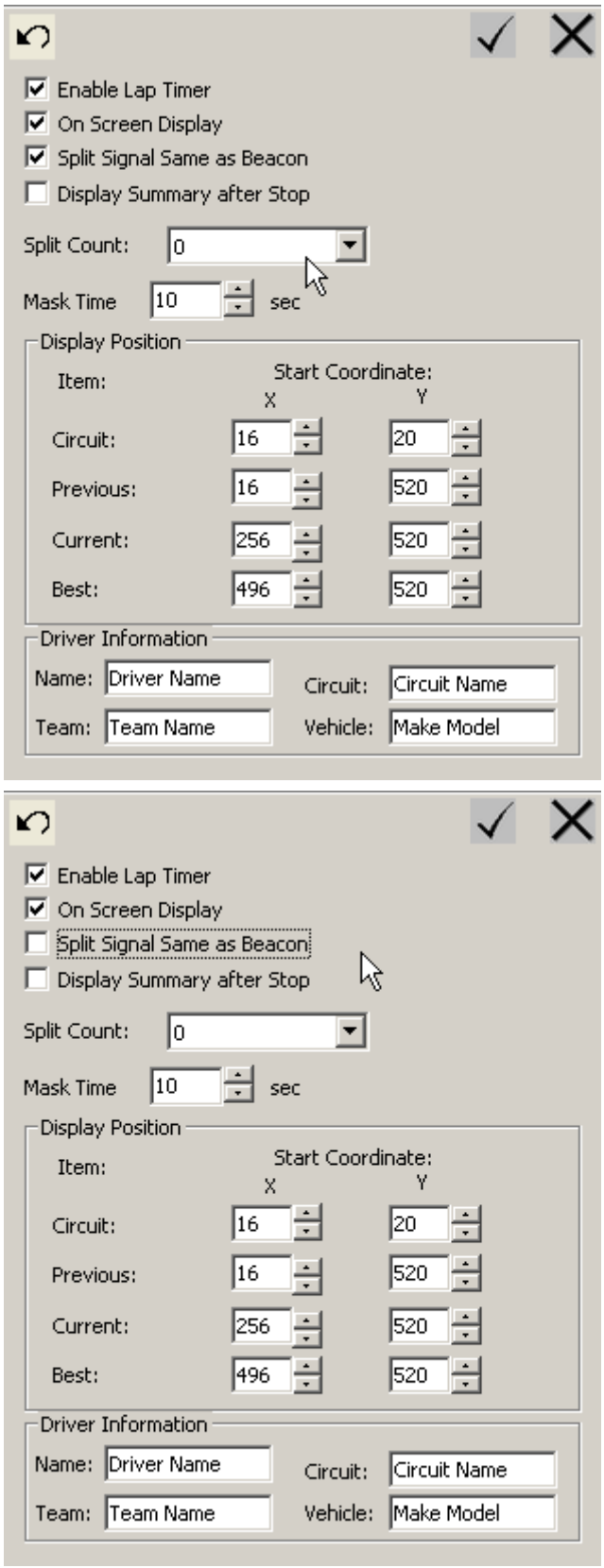


You can select the amount of Split Beacon for every loop; the maximum amount of Split Beacon is four on every loop.



If you don't use Split Beacon emitter on racing, please set the amount of Split Beacon emitter to zero or disable **Split Beacon** option directly.

The default configuration of the amount of Split Beacon is zero.



DR3 can record most 129 loops Lap Timer data on single recording video.

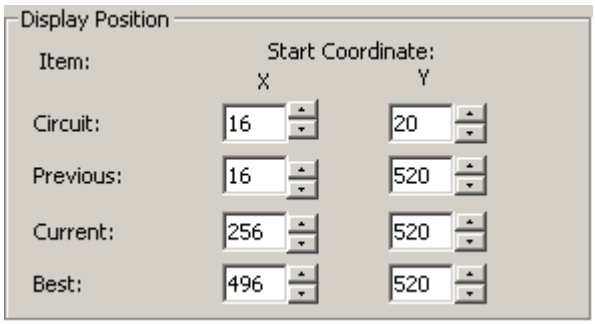
The **Time Stamp** will be disabled when you enable the beacon function.

The Beacon Configuration option is only for the special edition of DR3 with Lap Timer function.

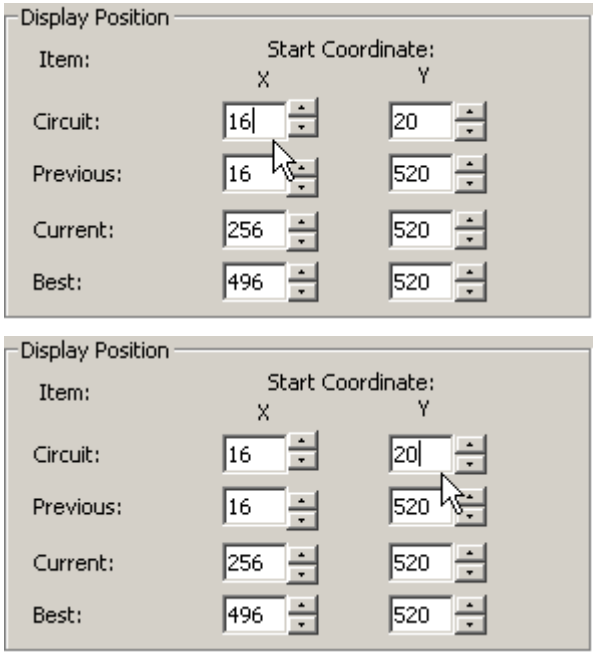
7.7.3 Adjust Position of Lap Timer Data on screen

You can adjust position of Lap Timer data on screen to fit different requirement & playback device.

You can adjust the position of all Lap Timer data item.



Select item of Lap Timer data that you want to adjust, and then set the value of X & Y coordinate on input area.



The unit of X & Y coordinate is pixel; the value bound is 720x576 of PAL & 720x480 of NTSC video standard.

Repeat above process to configure all position that you want to set.

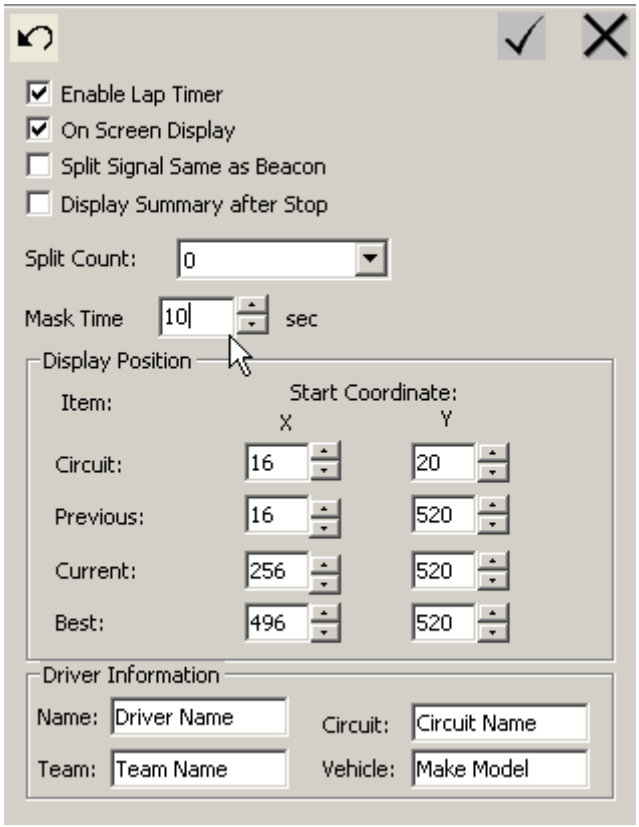
7.7.4 Connection

Simply connect the External Beacon Receiver into the Beacon jack on the DR3 and point the External Beacon Receiver to the Beacon. The Lap Timer will start to work when Beacon signal is detected.

7.7.5 Mask Time

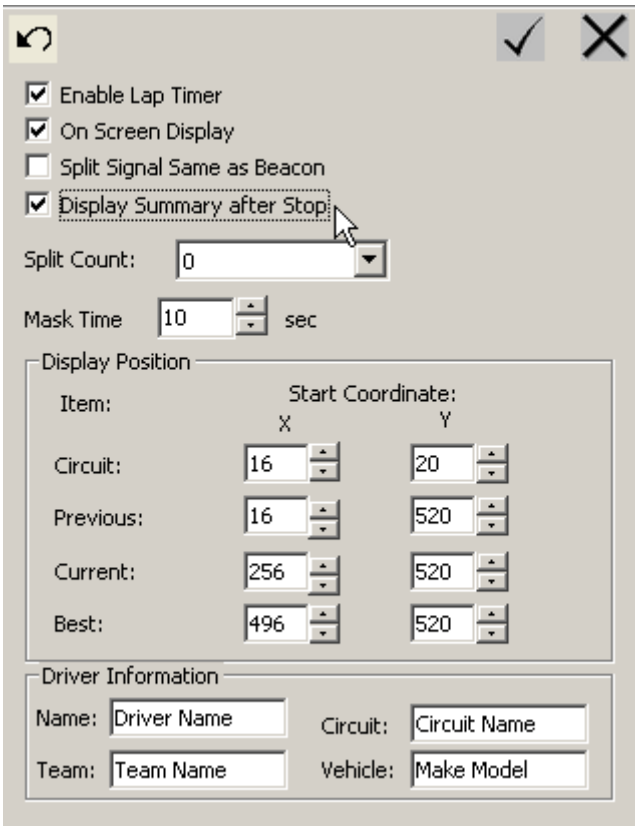
The Mask Timer is the time interval that DR3 doesn't response after the detection of Beacon & Split Beacon signal. The default value is 10 sec. If the time interval of twice signal from Beacon & any Split Beacon emitter is small than Mask Time that you set, the second signal will be ignored by DR3 .

When Split Beacon option is enabled, any Split Beacon emitter & standard Beacon emitter will be similar as signal emitter.



Maybe you would like to display summary of Lap Timer information on screen after recording video playback is finish when you replay video on PC.

Pick up Display Summary after Stop option to display all Lap Timer information on screen after recording video finish playback.



7.7.6 Recording of Lap Time

The time of each lap is record in the DVR_xxx.txt file. The file will looks like:

Hostname
Team WORKGROUP
Sport Motor
Scene Security

READY.. = 04:05.588

Summary:
Total Record Time: 04:05.588

**** Lap Timer is not a standard function of DR3 standard version, it is optional only for special version.***

7.8 Multi Profile Item Configuration

7.8.1 Configure & Save Multi-Profile Item

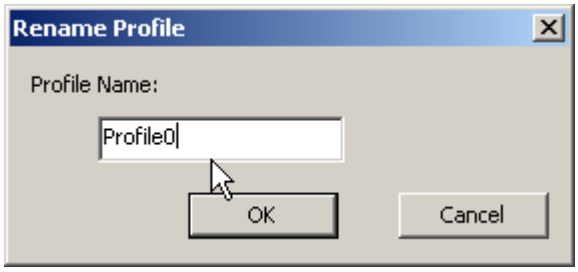
DR3 support multi-profile for different application, you can save 10 different configurations into single configuration file, and then you can switch to anyone profile between multi-profiles via LCD menu in your application.

You can configure & save multi-profiles item using DR3 Desktop.

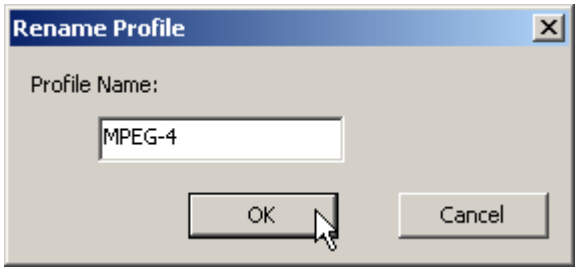
You can label every profile item using special name that be differentiated & remembered easily.

You can create, rename, delete & save profile item using corresponding button on button bar.

Click  to name or name the first profile item.



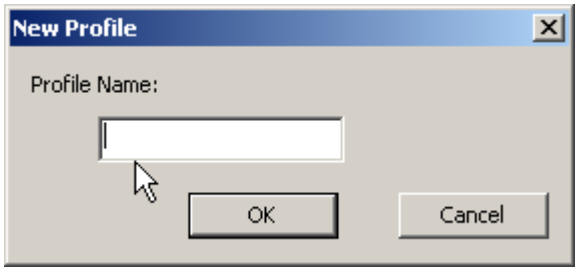
Input new name of the first profile item, then click **OK** button to save it.



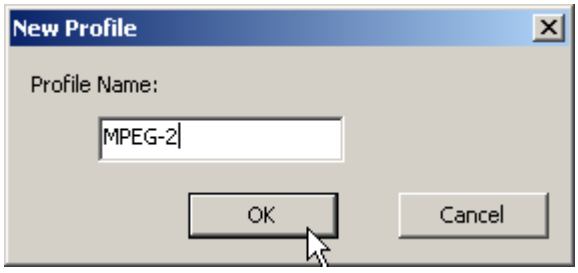
After you name or rename the first profile item, you can configure it that depends on your application or requirement.

To configure DR3 , please consult **Configure DR3** chapter.

After you finish the first profile, please click  to add new profile item.

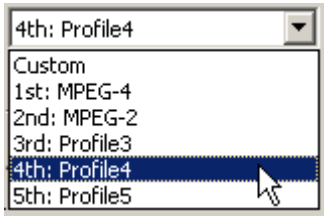


Input name of the second profile item in name area, then click **OK** button to save it.



Now you can configure the second profile item as same as for the first profile item.

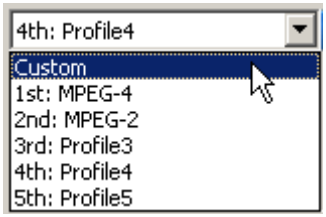
You can select anyone profile item from pull-down menu to configure it at anytime.



DR3 Desktop can keep maximum 9 profile items for a device at the same time. Certainly, only one profile item is valid on once. You can switch one to another profile item via LCD menu.

After you finish configuration for all profile items that you set, you can click  button to save all configuration.

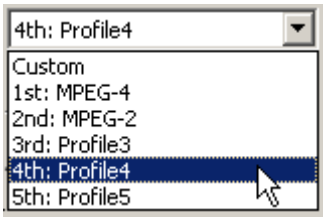
The special **Custom** profile can't be edit on DR3 Desktop, it only valid on LCD menu.



You can change configuration in profile **Custom** on DR3 via LCD menu only, all changes of configuration that you set on DR3-S1s active only when you set Custom as default profile of DR3 via LCD menu.

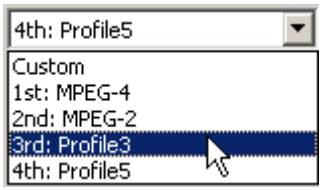
7.8.2 Delete Profile Item

If you want to delete anyone profile item, please select profile item that you want to delete from pull-down menu.



Then click  to delete it.

After you delete anyone profile item, the profile item after it will ascend to current arrange position.



7.8.3 Load Old Configuration

If you want to cancel all current configurations, you can click  to reload the last saved configuration, all changes that don't be saved will be lost.

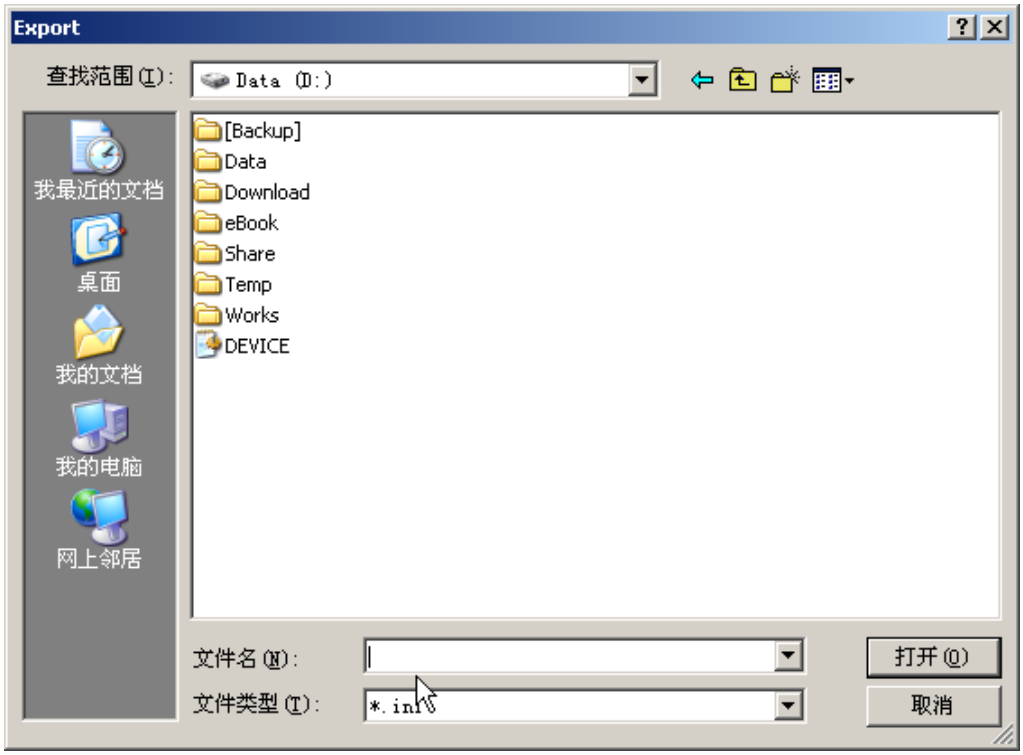
7.8.4 Reset selected profile item to default configuration

Sometime maybe you want to record different standard TV or video signal, you can set anyone profile item to special video standard, the resolution, frame & correlative internal parameter will be set to proper depend on the video standard, and the valid coordinate range of Lap Timer data display will be adjusted to proper position automatically.

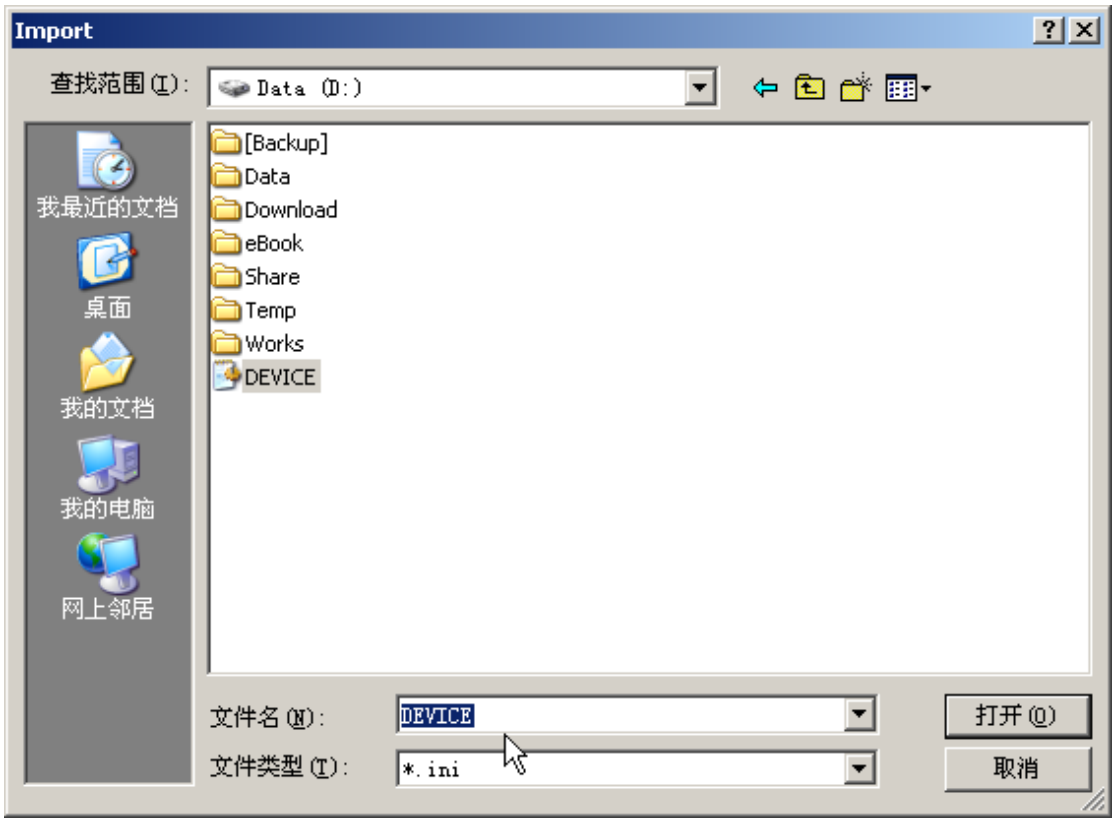
You can set different profile item for different configuration, but sometimes you find the special profile with many error or inapplicable configuration in profile, you can select this profile, and then click  to restore all configuration to default values.

7.8.5 Backup & Restore Configuration File

When you finish configuration for all profile item, to avoid correctly configuration be lost or confused, after you save all configuration, you can export configuration file to appointed disk or folder.



Certainly, you can reload configuration data that you backup previously to restore DR3 to special configuration, import backup configuration data from disk or folder that you saved backup.



7.8.6 Reboot DR3 after you finish configuration

After you finish all profile configurations, you can reboot DR3 using current profile configuration via Desktop software, click  to reboot DR3-S1mmediately.

When you click  to reboot DR3 , system will prompt you to get confirm again.

Click **Yes (Y)** button to reboot DR3 .

The Reboot  function is valid only when you connect DR3 to PC via network connection.

If you startup Desktop software via CF card that connected to PC, the Reboot  button will be disable.

7.8.7 Switch Configuration Item

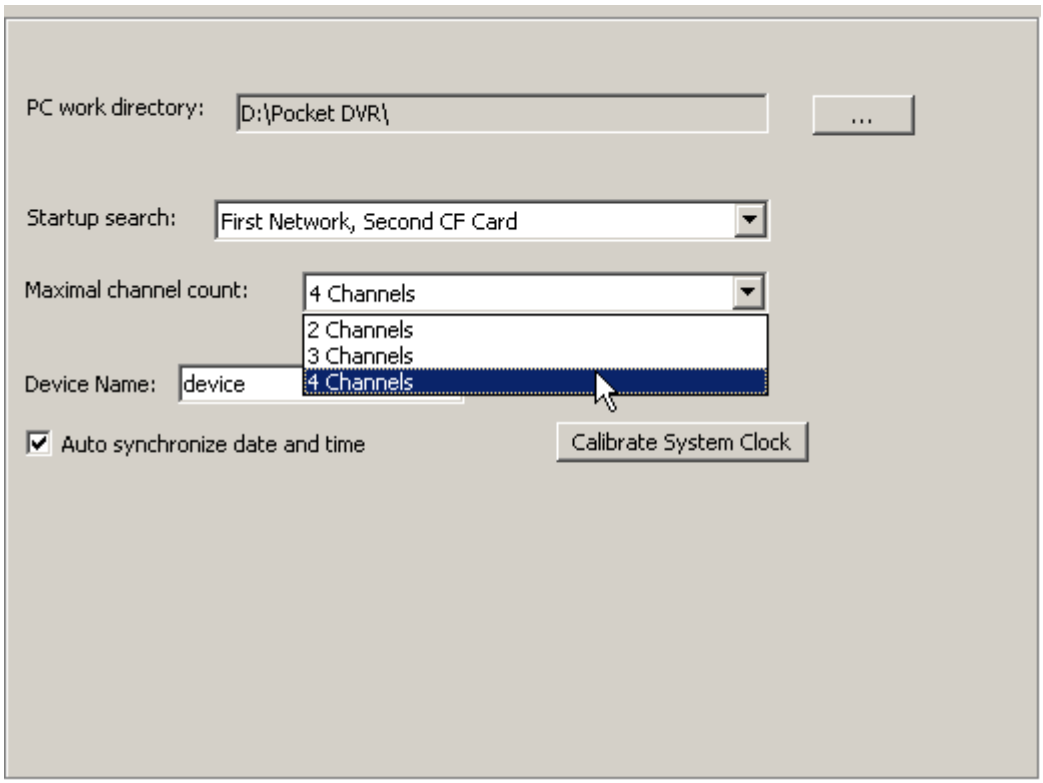
You can switch configuration item via LCD Menu during use DR3 .

8. Configure 2/3/4 Channel DR3

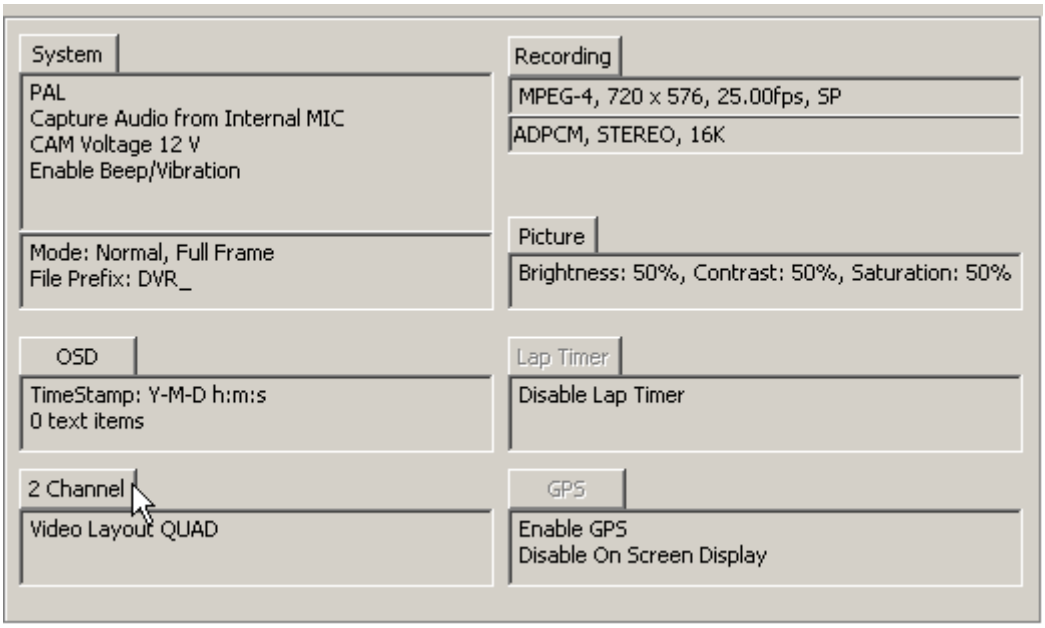
Multi-Channels DR3-S1nclude 2 Channels, 3 Channels & 4 Channels model, you can connect 2, 3 or 4 cameras to DR3 & record all cameras video at the same time. To use 2/3/4 channels DR3 successfully, you need configure DR3 Desktop to feat version to match multi channels DR3 in your hand.

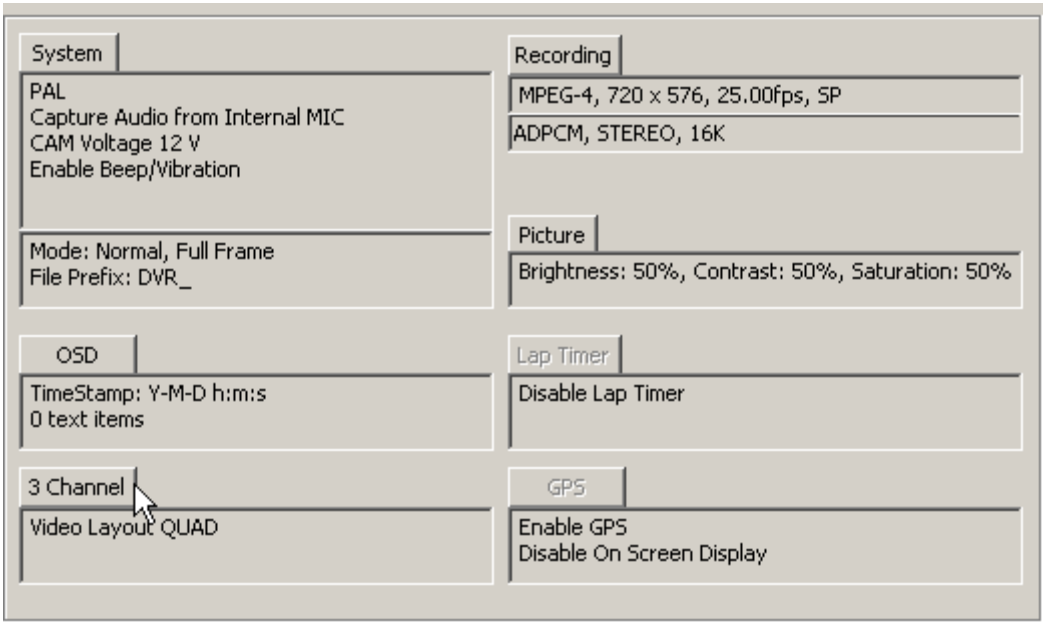
If you use external power supplier to power DR3 & cameras, the output voltage for cameras is same as input voltage that offer by external power supplier, when you use car power supplier to power DR3 & cameras, maybe voltage will too high & fluctuant, it maybe damage external cameras, please ensure your camera can endure the highest voltage from power supplier.

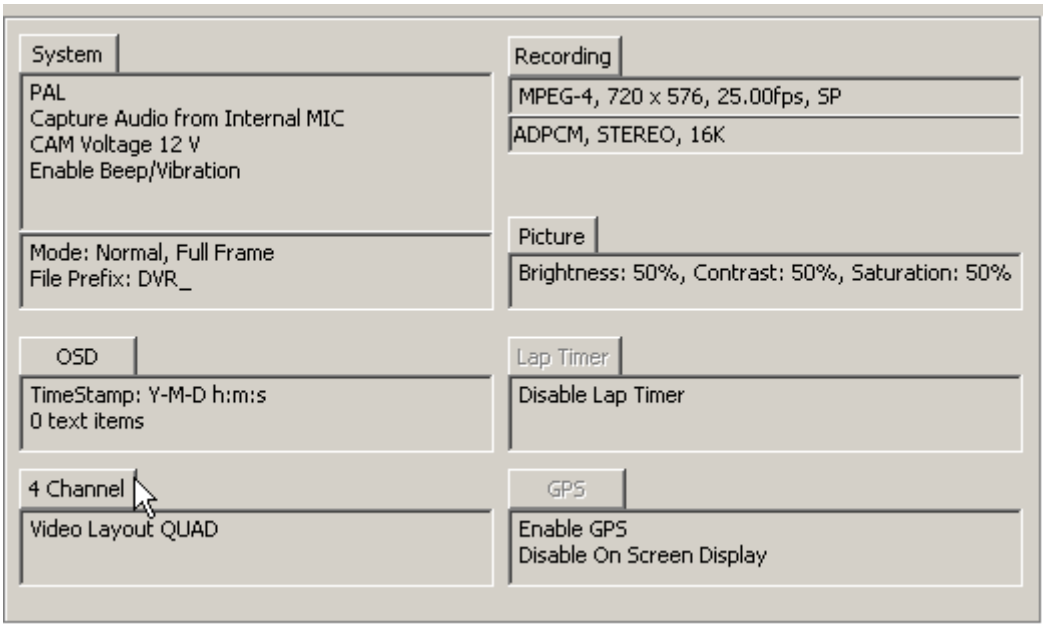
Click **Advanced** button  to configure DR3 Desktop to feat version.



When you configure DR3 Desktop to correct version, DR3 Desktop will display as match version, and all invalid option will be blocked.


System
PAL
Capture Audio from Internal MIC
CAM Voltage 12 V
Enable Beep/Vibration
Mode: Normal, Full Frame
File Prefix: DVR_
Recording
MPEG-4, 720 x 576, 25.00fps, SP
ADPCM, STEREO, 16K
Picture
Brightness: 50%, Contrast: 50%, Saturation: 50%
OSD
TimeStamp: Y-M-D h:m:s
0 text items
Lap Timer
Disable Lap Timer
2 Channel
Video Layout QUAD
GPS
Enable GPS
Disable On Screen Display

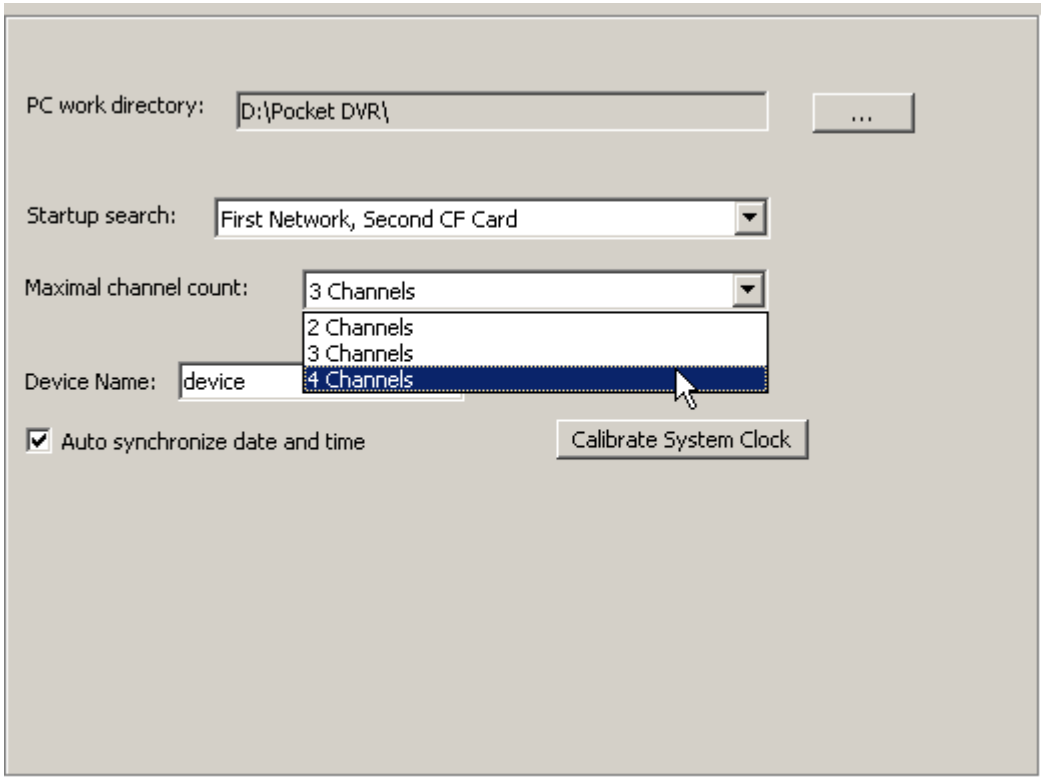

System
PAL
Capture Audio from Internal MIC
CAM Voltage 12 V
Enable Beep/Vibration
Mode: Normal, Full Frame
File Prefix: DVR_
Recording
MPEG-4, 720 x 576, 25.00fps, SP
ADPCM, STEREO, 16K
Picture
Brightness: 50%, Contrast: 50%, Saturation: 50%
OSD
TimeStamp: Y-M-D h:m:s
0 text items
Lap Timer
Disable Lap Timer
3 Channel
Video Layout QUAD
GPS
Enable GPS
Disable On Screen Display



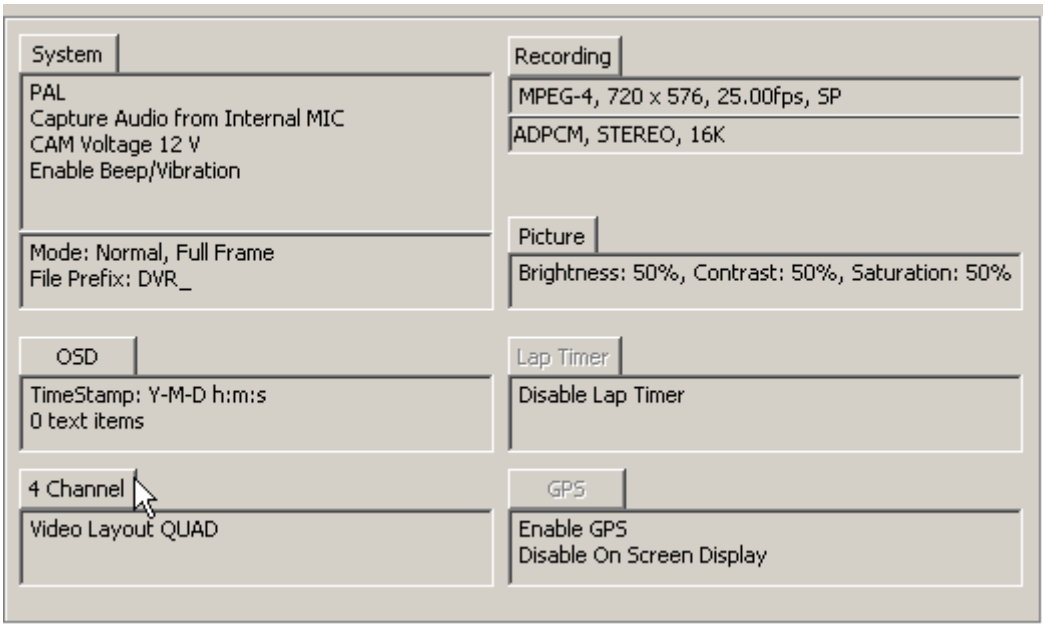
8.1 Configure 4 Channel DR3

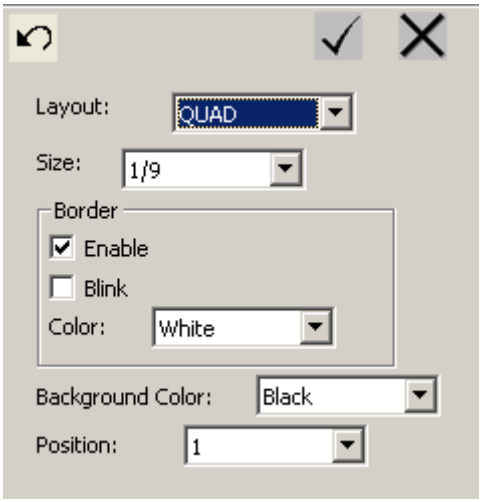
The 4-Channel DR3 can connect four video inputs at the same time.

Click **Advanced** button  to configure DR3 Desktop to 2 Channel DR3 version.



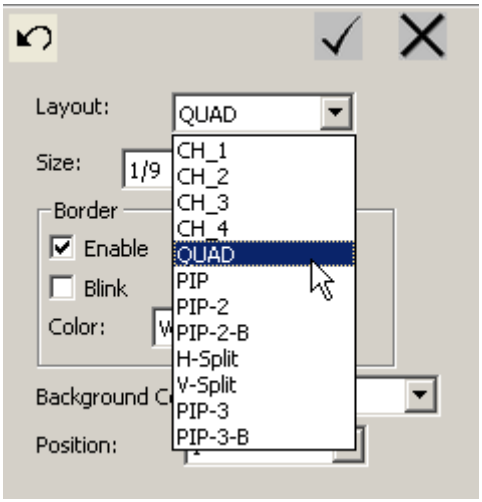
After you set DR3 Desktop to 4 Channel DR3 version, you can Click **4 Channel** tab on **Device Configuration** area to configure 4-Channel DR3 .





8.1.1 Video Input

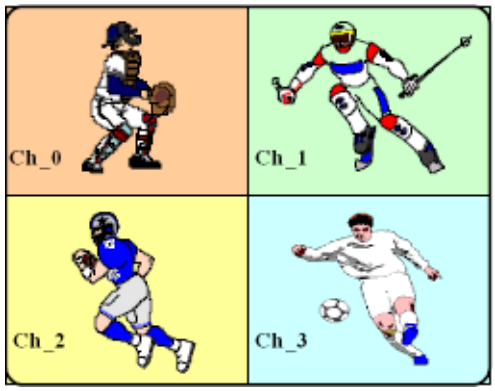
You can select 1, 2, 3 or 4 channel video inputs at the same time, and record these video in the same recording video.



In the 4 Channel area, pull down menu of Layout to select the video input source, amount of video inputs and video input arrange method.

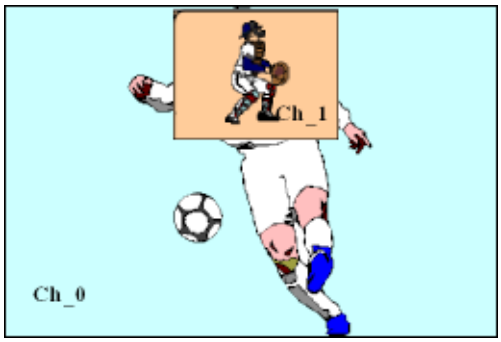
The **CH_1**, **CH_2**, **CH_3** & **CH_4** item mean video in 1 to video in 4 inputs are selected, this is for 1 channel recording, and you can select any video input that you want to record from.

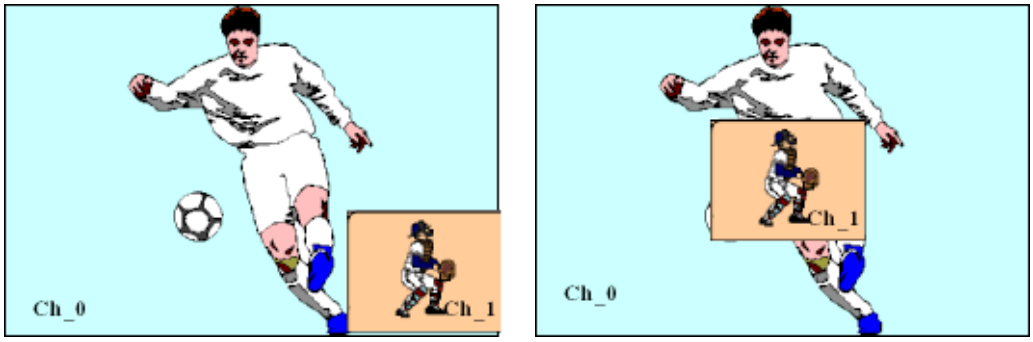
If you want to record 4 channel video at the same time, please select **QUAD**. The recorded video will include 4 channel videos in one video file.



PIP item is for 2 channels video inputs at the same time, the 2 channels videos will be recorded in one video file at the same time.

PIP mode supports nine different position beforehand, please consult the **Picture-In-Picture (PIP)** chapter for more details.

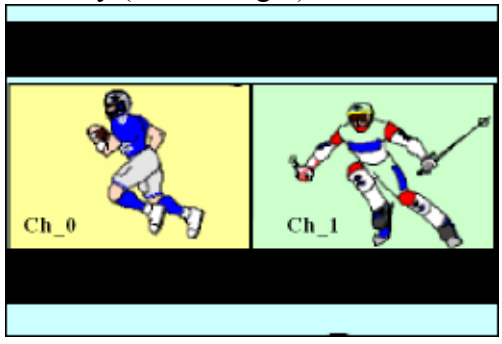




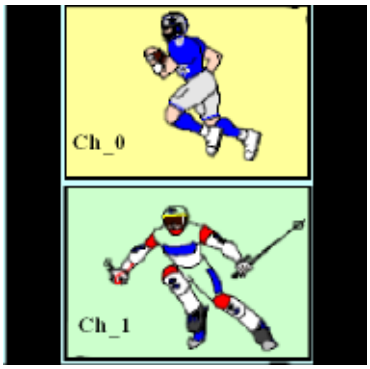
PIP-2 item is for 3 channel video inputs at the same time, the 3 channel videos will be recorded in one video file at the same time.

PIP-2-B item is another arranges method for 3 channel video inputs at the same time, the 3 channel videos will be record in one video file at the same time.

H-Split item is for 2 channel video inputs at the same time, the 2 channel videos will be recorded in one video file. **H-Split** item means the 2 channel video inputs array in recording video file horizontally (Left & Right).



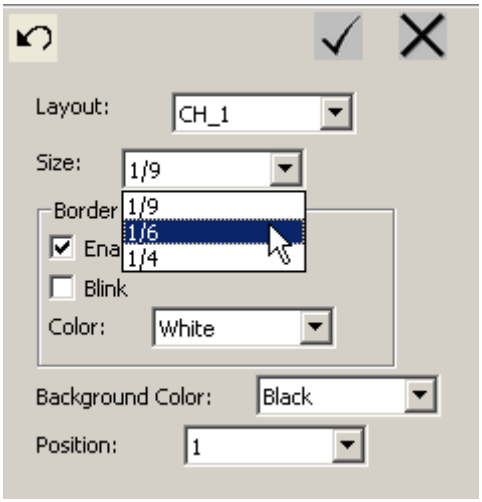
V-Split item is for 2 channel video inputs at the same time, the 2 channel videos will be recorded in one video file at the same time. **V-Split** item means the 2 channel video inputs array in recording video file vertically (Top & Button).



8.1.2 Size of Secondary Video Layout in PIP

When you connect more than one camera & select PIP Layout mode, you can set secondary video signal display as different size that according to your configuration.

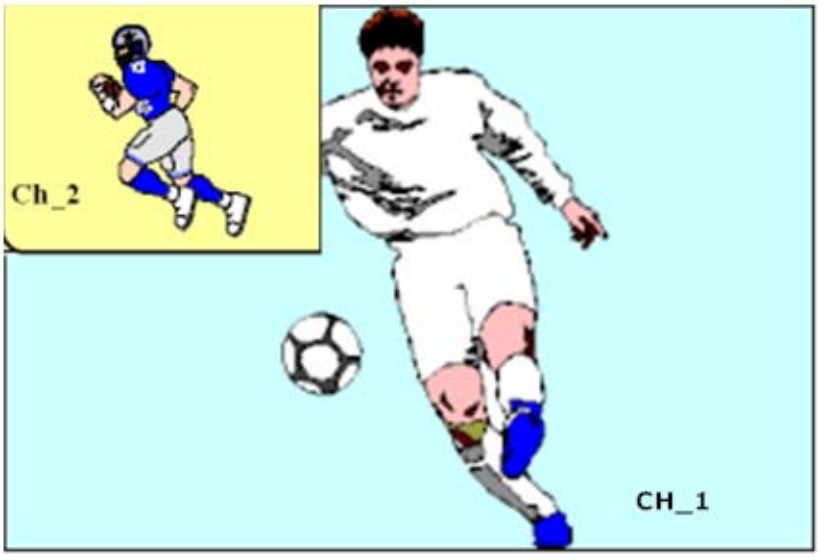
You can set secondary video to one of three sizes: 1/9, 1/6 or 1/4 of full screen.

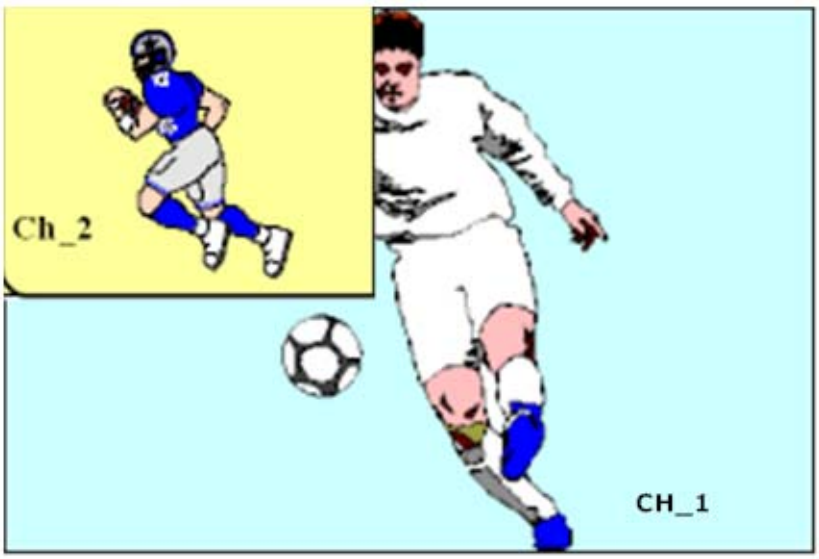


The default size is 1/9 of full screen.

The layout of three sizes as follow:

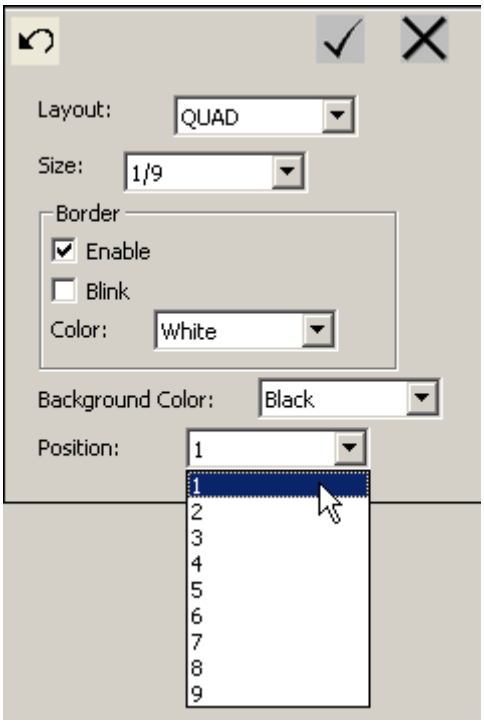

Ch_2
CH_1


Ch_2
CH_1

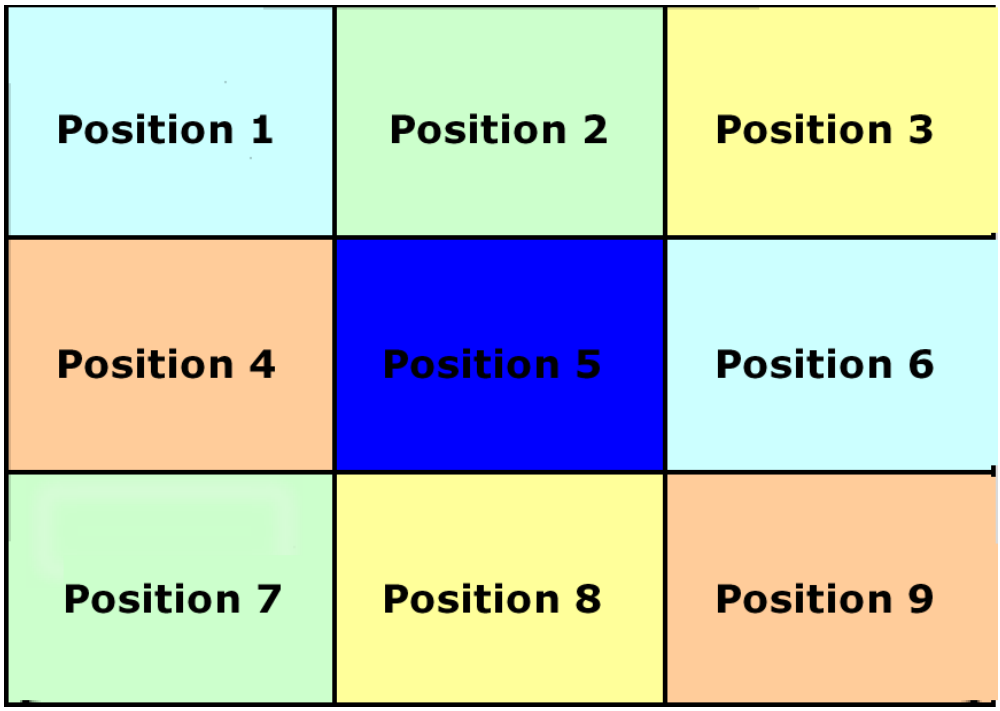

Ch_2
CH_1

8.1.3 Picture-In-Picture (PIP)

You can configure any position for PIP recording video, it has nine different positions, and you can select any position for your requirement from **Position** option.



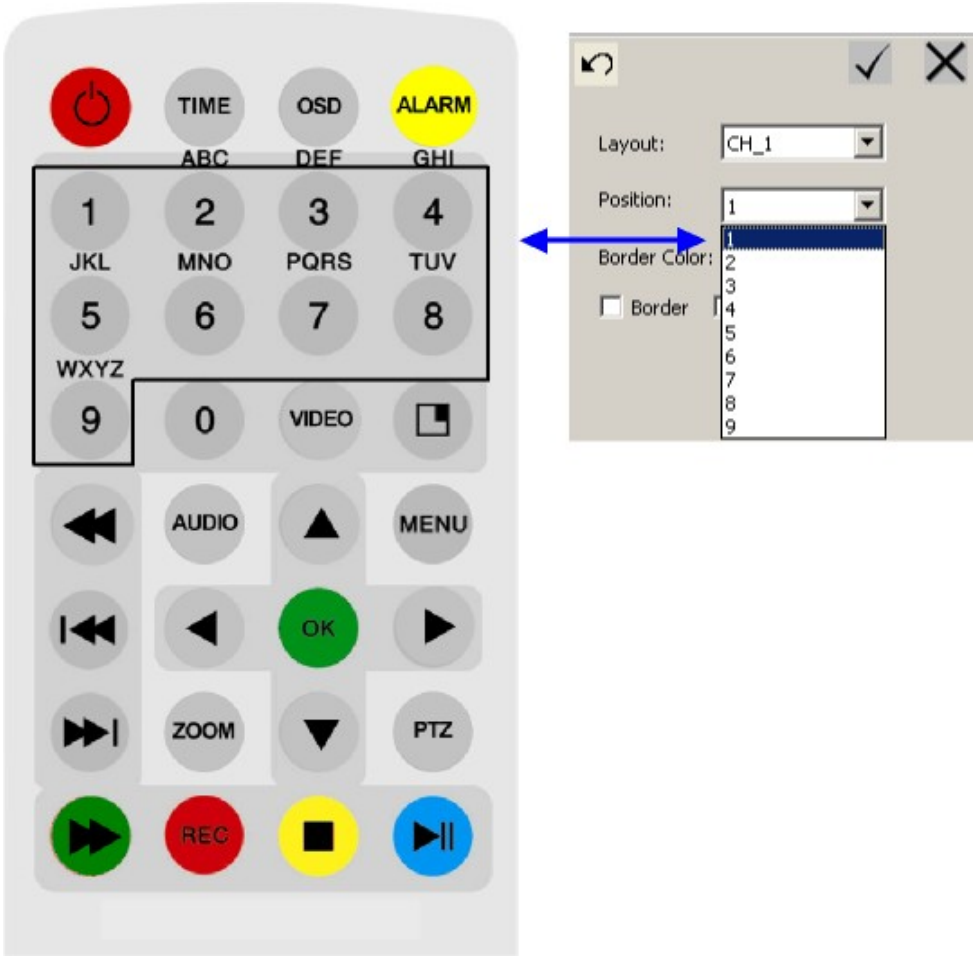
You can configure or switch the array method of Picture-In-Picture via the DR3 Desktop & IR remote controller.



The numeric keys on the IR remote controller is can be programmed with 9 array methods of Picture-In-Picture, you can configure it & select any one array method as your default array using the DR3 Desktop.

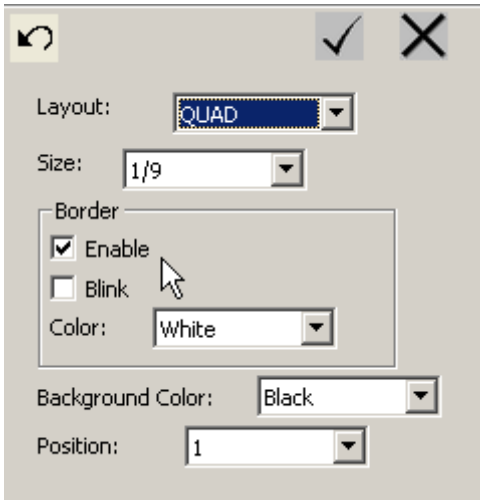
You can switch the array method using the numeric keys on the IR remote controller directly when you record the video using the 4 Channel DR3 . The numeric keys 1~9 is controls the 9 items in the **Position** pull down menu.

Numeric Key on IR remote Controller	Item in Position Menu
1	Position 1
2	Position 2
3	Position 3
4	Position 4
5	Position 5
6	Position 6
7	Position 7
8	Position 8
9	Position 9

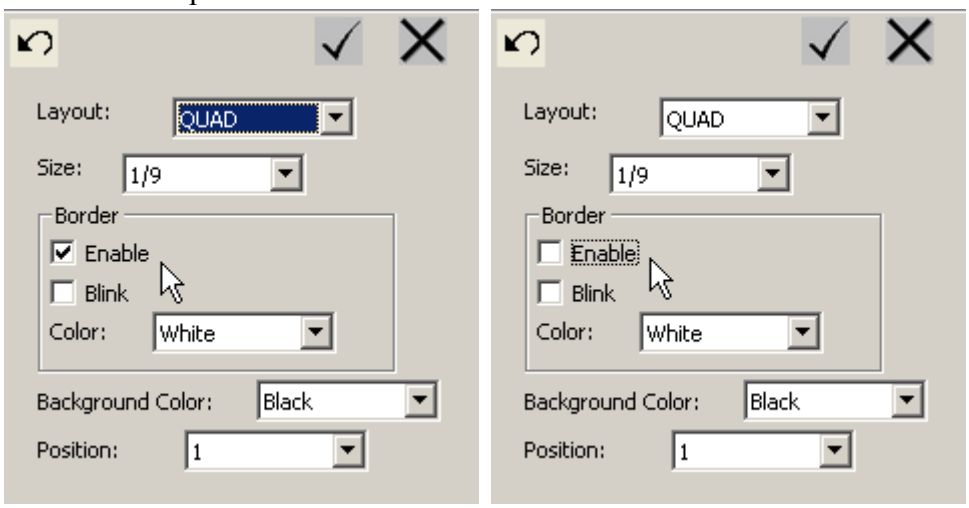


8.1.4 The Border of Frame

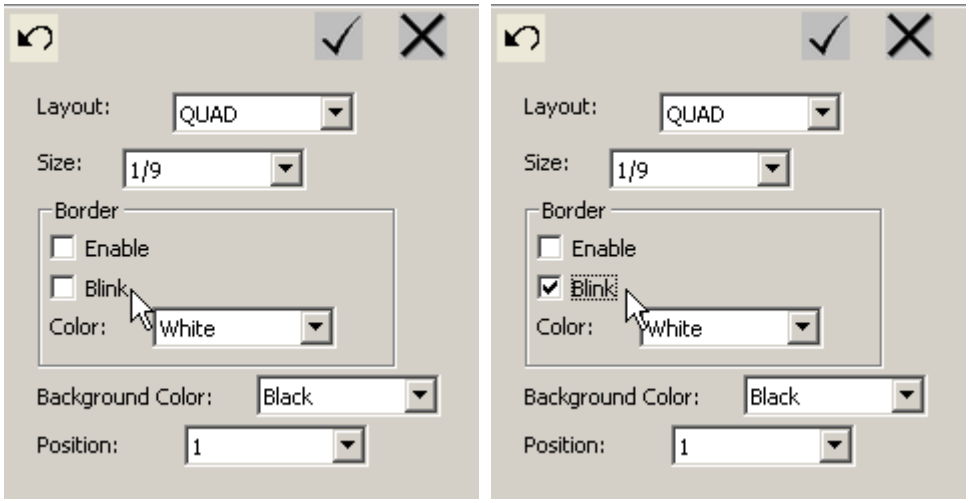
When you use 2 or 4 channel video inputs, you can enable/disable or select different styles of frame for a better scene effect.



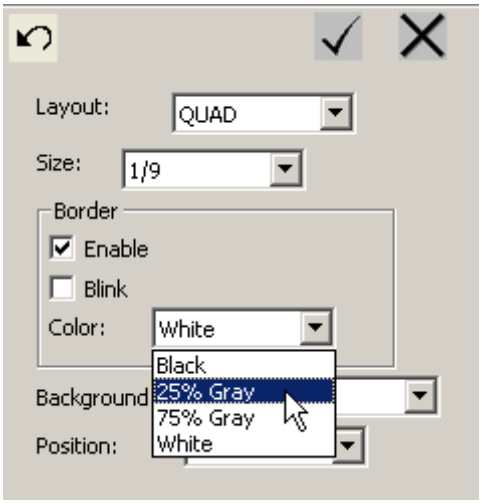
Switch on **Border** option to enable frame of video for Picture-In-Picture function.



At the same time, you can switch on **Border Blink** option to enable frame of video glint.

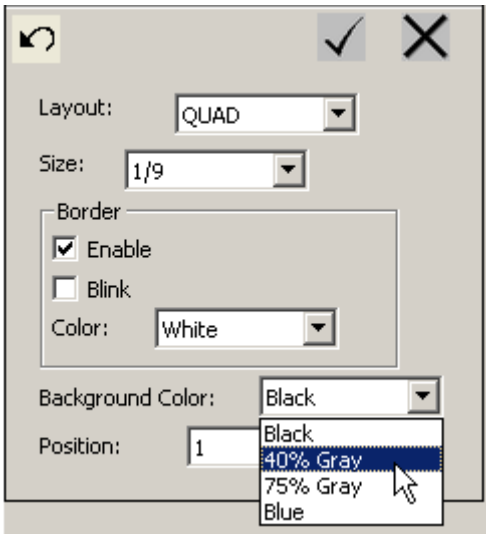


You can select 4 different styles of border frame.



8.1.5 Background Color of Screen

You can select 4 different color of screen background.



8.1.6 Configuration Menu Output

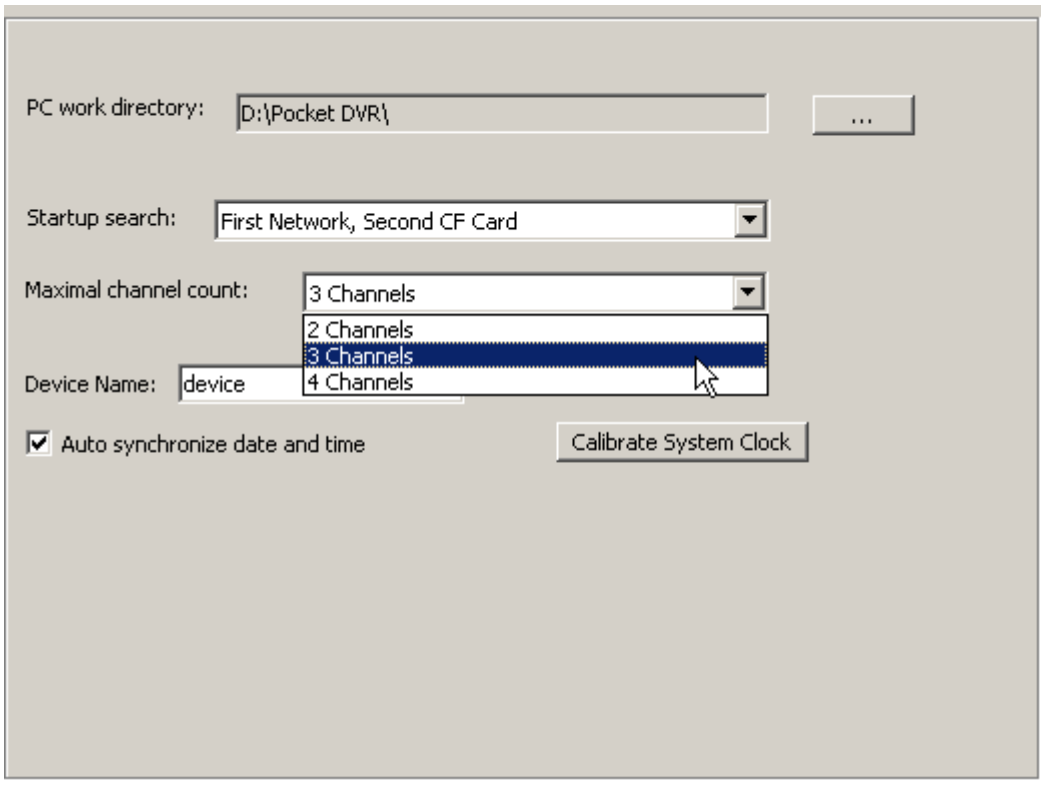
4 Channel DR3 supports analog output to TV or Monitor, when you connect a TV or Monitor to the Audio/Video Output, you can preview current video & the configure menu.

NOTE: This option is only for 2/3/4-Channels DR3 ; it is not supported by 1-CH DR3 .

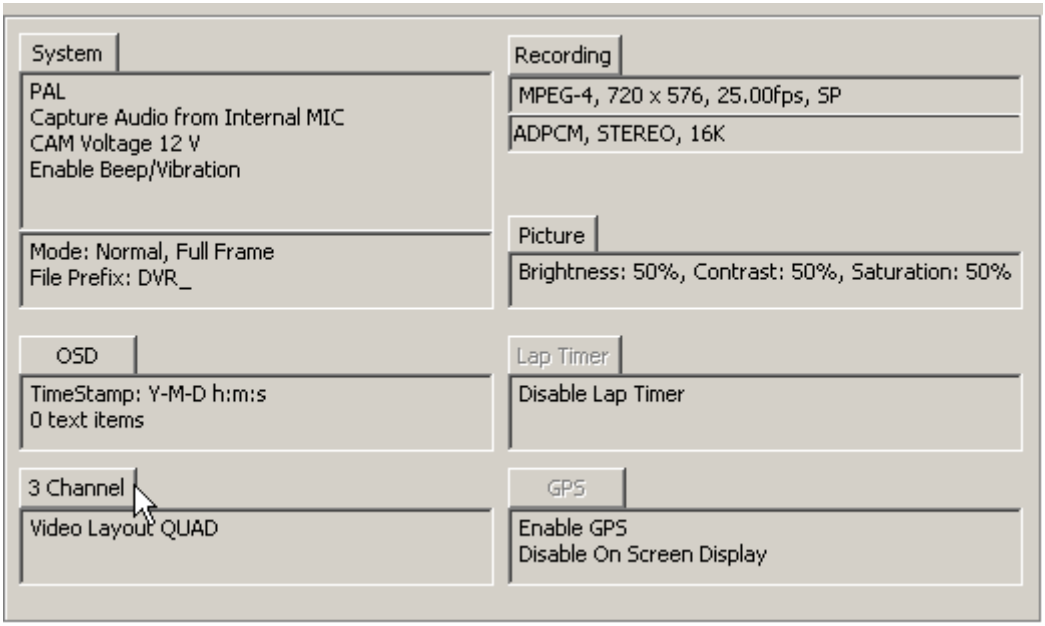
8.2 Configure 3 Channel DR3

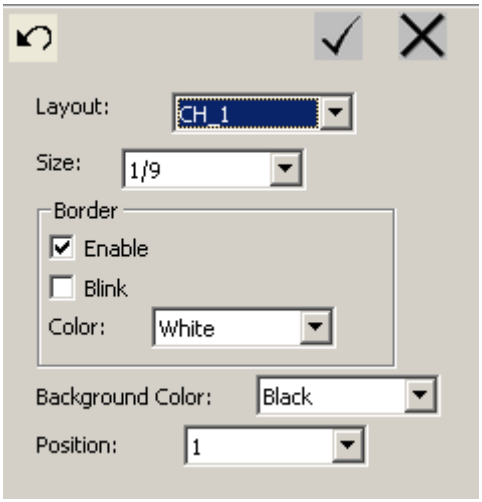
The 3-Channel DR3 can connect four video inputs at the same time.

Click **Advanced** button  to configure DR3 Desktop to 3 Channel DR3 version.



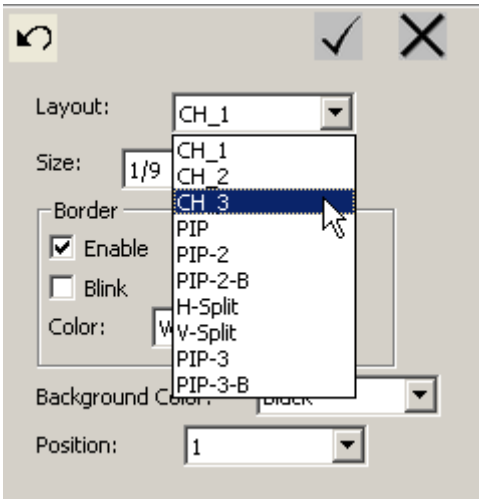
After you set DR3 Desktop to 3 Channel DR3 version, you can Click **3 Channel** tab on **Device Configuration** area to configure 3-Channel DR3 .





8.2.1 Video Input

You can select 1, 2 or 3 channels video inputs at the same time, and record these video in the same recording video.

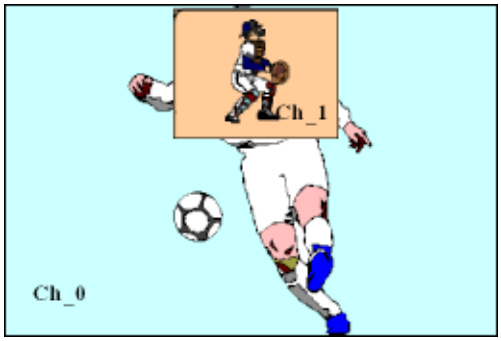


In the 3 Channel area, pull down menu of Layout to select the video input source, amount of video inputs and video input arrange method.

The **CH_1**, **CH_2** & **CH_3** item mean video in 1 to video in 3 inputs are selected, this is for 1 channel recording, and you can select any video input that you want to record from.

PIP item is for 2 channels video inputs at the same time, the 2 channels videos will be recorded in one video file at the same time.

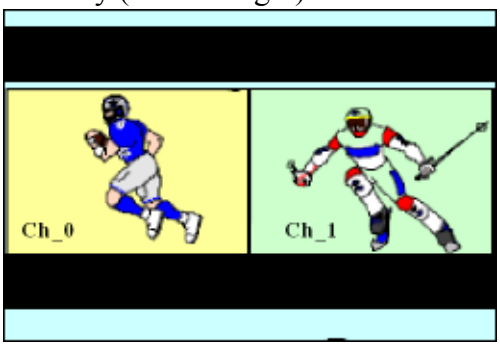
PIP mode supports nine different position beforehand, please consult the **Picture-In-Picture (PIP)** chapter for more details.



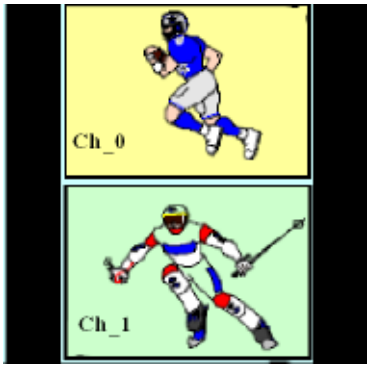
PIP-2 item is for 3 channel video inputs at the same time, the 3 channel videos will be recorded in one video file at the same time.

PIP-2-B item is another arranges method for 3 channel video inputs at the same time, the 3 channel videos will be record in one video file at the same time.

H-Split item is for 2 channel video inputs at the same time, the 2 channel videos will be recorded in one video file. **H-Split** item means the 2 channel video inputs array in recording video file horizontally (Left & Right).



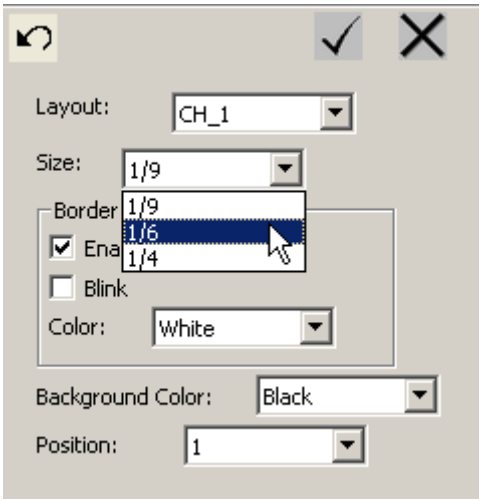
V-Split item is for 2 channel video inputs at the same time, the 2 channel videos will be recorded in one video file at the same time. **V-Split** item means the 2 channel video inputs array in recording video file vertically (Top & Button).



8.2.2 Size of Secondary Video Layout in PIP

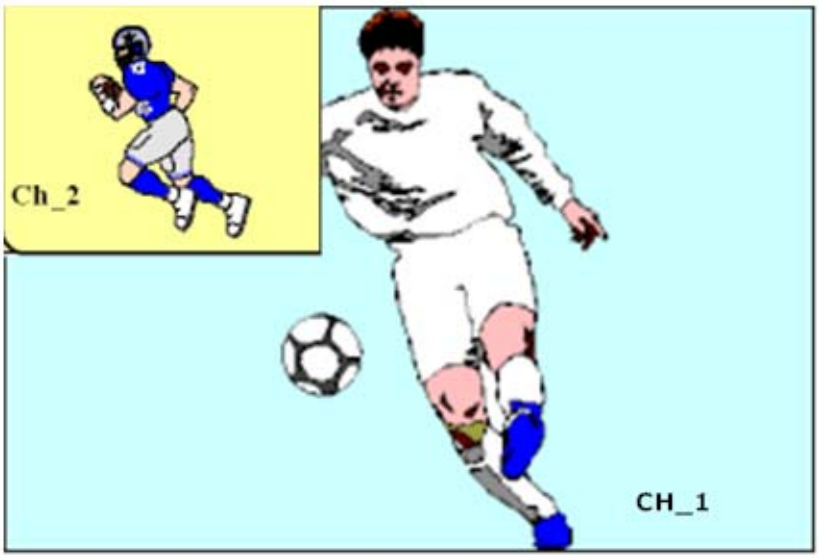
When you connect more than one camera & select PIP Layout mode, you can set secondary video signal display as different size that according to your configuration.

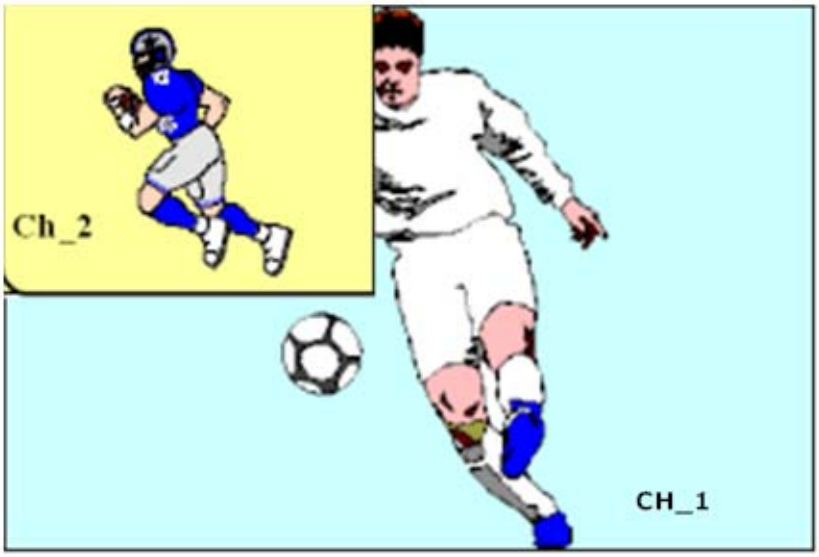
You can set secondary video to one of three sizes: 1/9, 1/6 or 1/4 of full screen.



The default size is 1/9 of full screen.

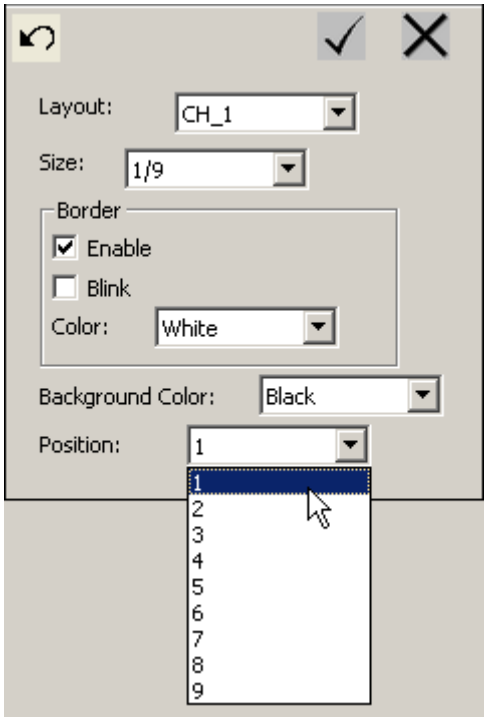
The layout of three sizes as follow:



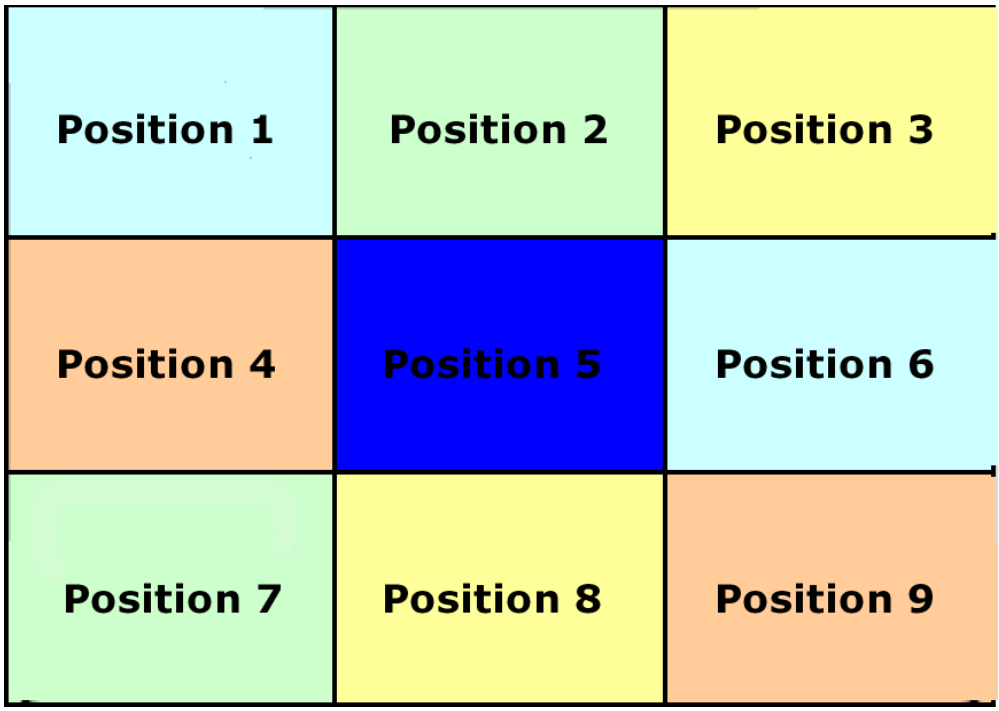


8.2.3 Picture-In-Picture (PIP)

You can configure any position for PIP recording video, it has nine different positions, and you can select any position for your requirement from **Position** option.



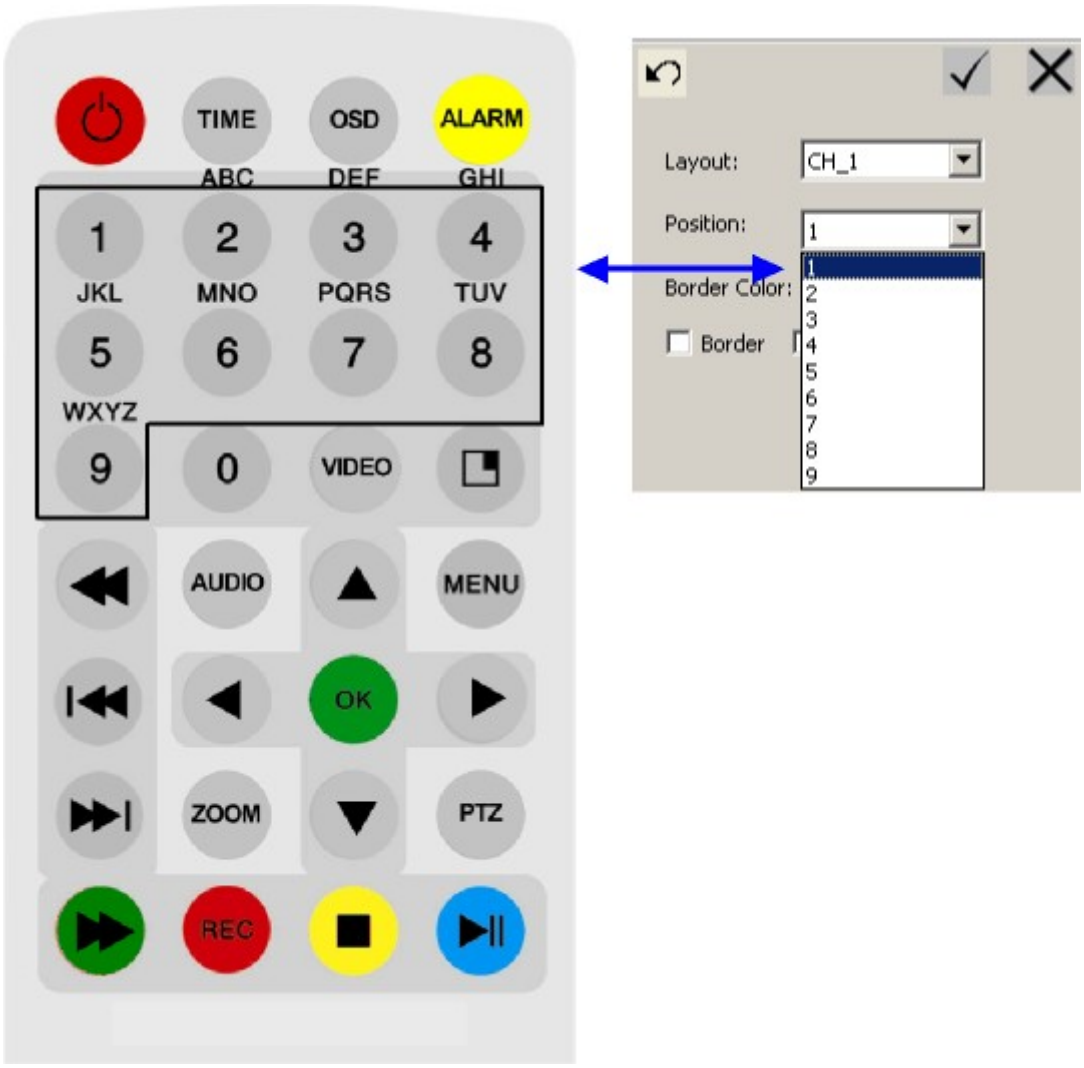
You can configure or switch the array method of Picture-In-Picture via the DR3 Desktop & IR remote controller.



The numeric keys on the IR remote controller is can be programmed with 9 array methods of Picture-In-Picture, you can configure it & select any one array method as your default array using the DR3 Desktop.

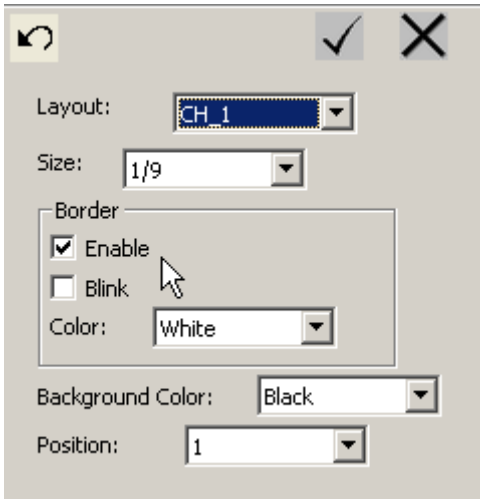
You can switch the array method using the numeric keys on the IR remote controller directly when you record the video using the 3 Channel DR3 . The numeric keys 1~9 is controls the 9 items in the **Position** pull down menu.

Numeric Key on IR remote Controller	Item in Position Menu
1	Position 1
2	Position 2
3	Position 3
4	Position 4
5	Position 5
6	Position 6
7	Position 7
8	Position 8
9	Position 9

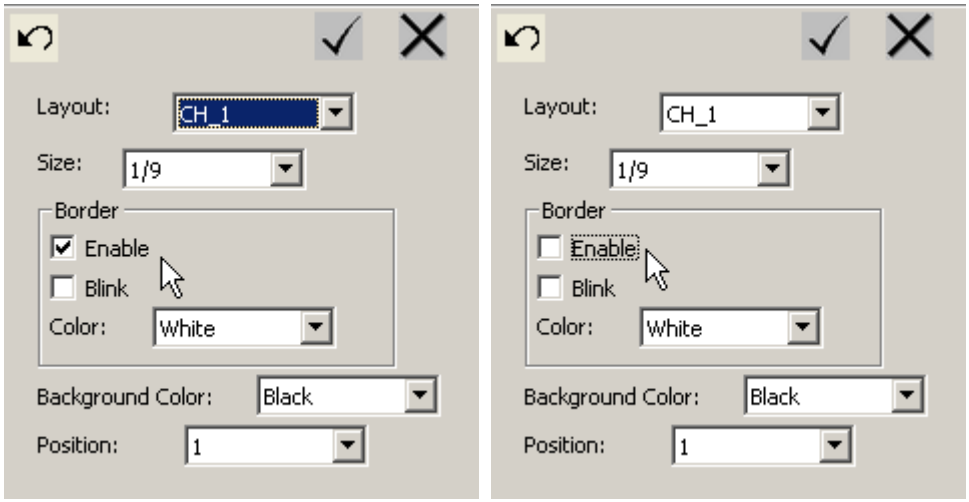


8.2.4 The Border of Frame

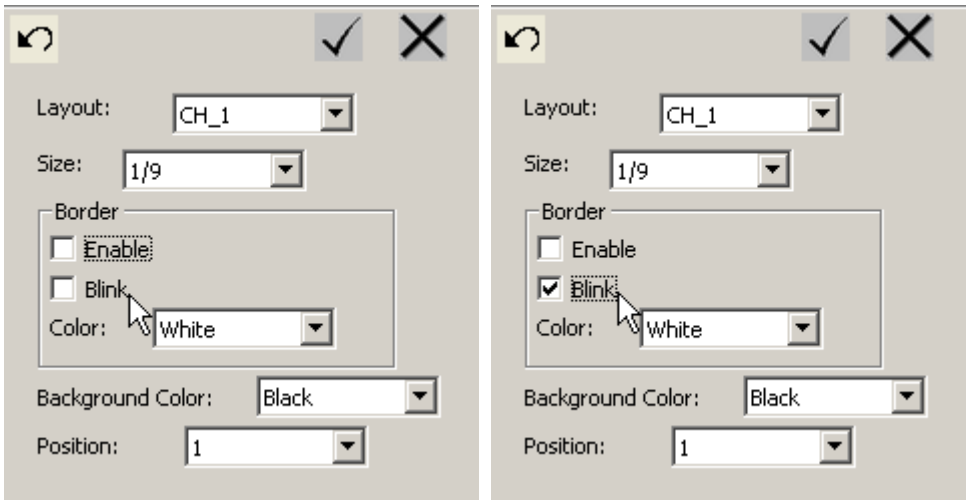
When you use 2 or 3 channel video inputs, you can enable/disable or select different styles of frame for a better scene effect.



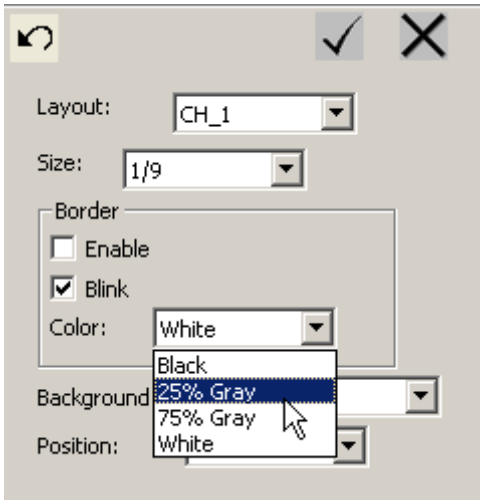
Switch on **Border** option to enable frame of video for Picture-In-Picture function.



At the same time, you can switch on **Border Blink** option to enable frame of video glint.

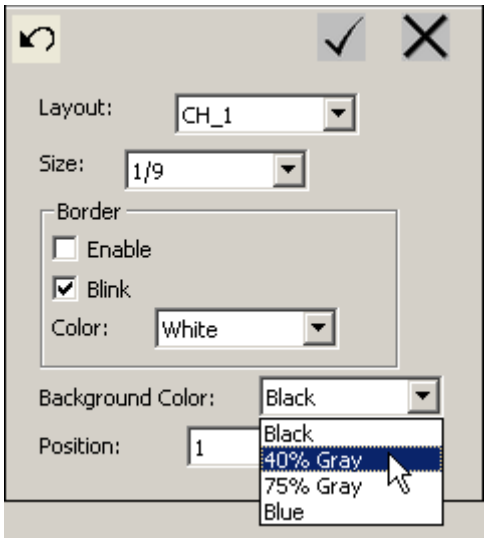


You can select 4 different styles of border frame.



8.2.5 Background Color of Screen

You can select 4 different color of screen background.



8.2.6 Configuration Menu Output

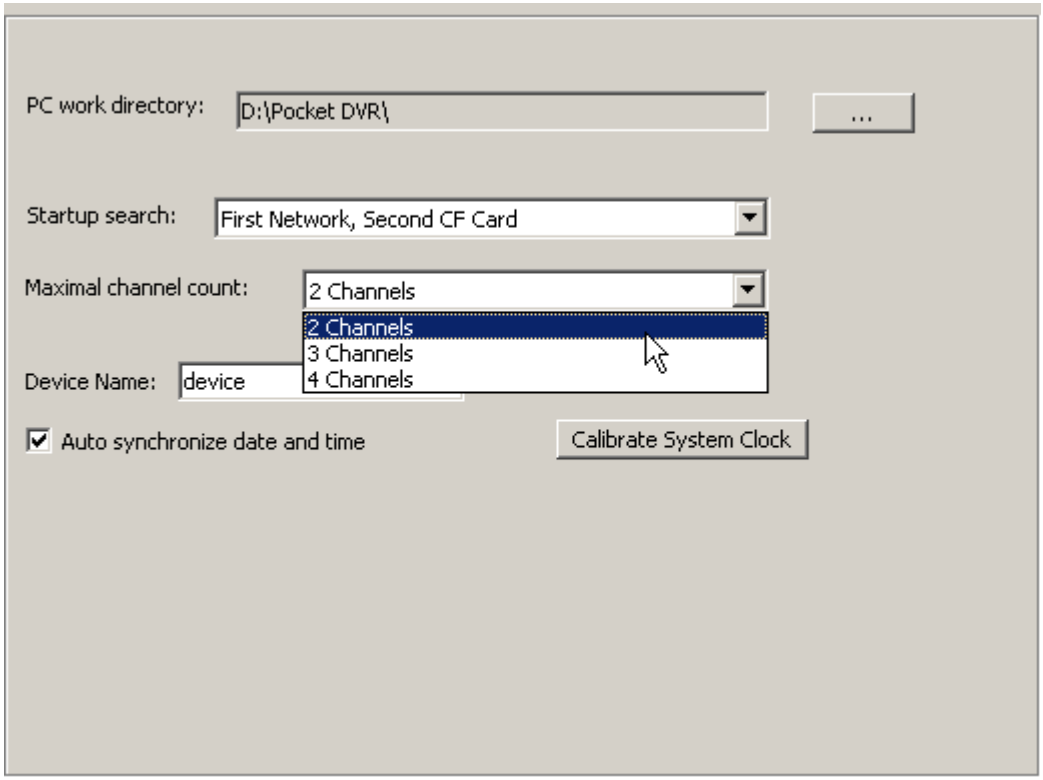
3 Channel DR3 supports analog output to TV or Monitor, when you connect a TV or Monitor to the Audio/Video Output, you can preview current video & the configure menu.

NOTE: This option is only for 2/3/4-Channels DR3 ; it is not supported by 1-CH DR3 .

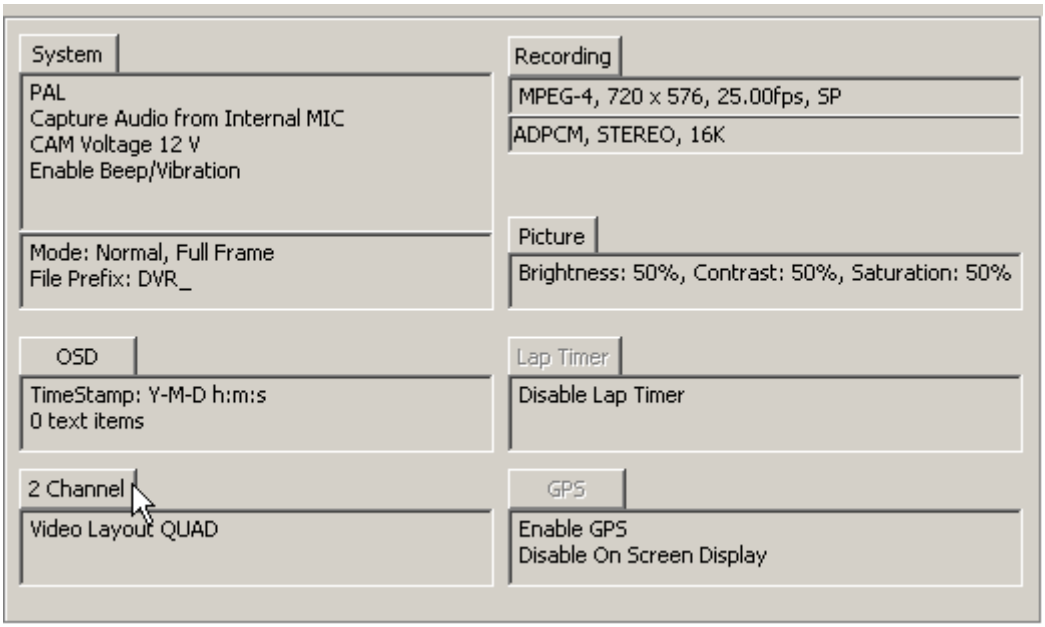
8.3 Configure 2 Channel DR3

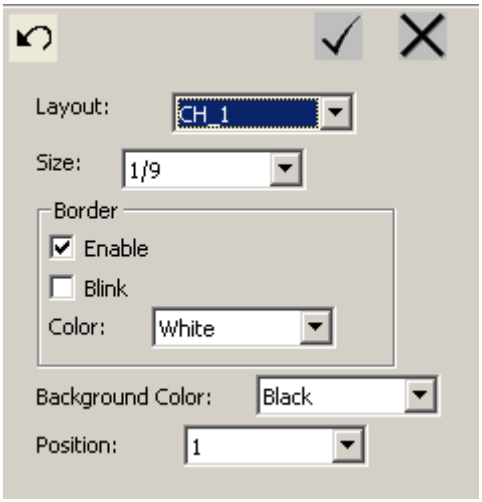
The 2-Channel DR3 can connect four video inputs at the same time.

Click **Advanced** button  to configure DR3 Desktop to 2 Channel DR3 version.



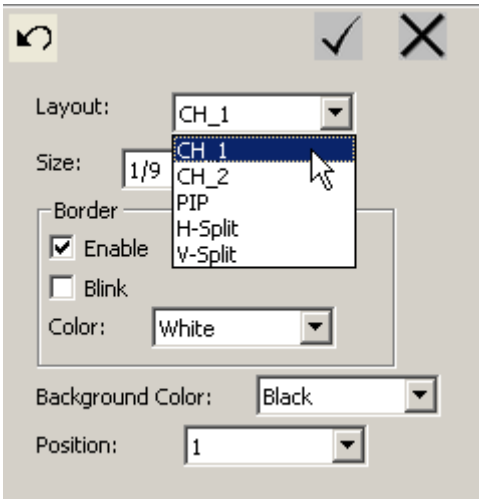
After you set DR3 Desktop to 2 Channel DR3 version, you can Click **2 Channel** tab on **Device Configuration** area to configure 2-Channel DR3 .





8.3.1 Video Input

You can select 1 or 2 channels video inputs at the same time, and record these video in the same recording video.

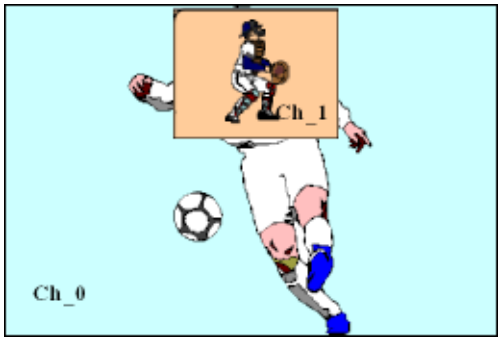


In the 2 Channel area, pull down menu of Layout to select the video input source, amount of video inputs and video input arrange method.

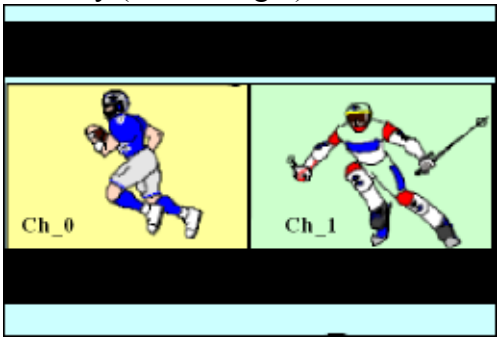
The **CH_1** & **CH_2** item mean video in 1 to video in 2 inputs are selected, this is for 1 channel recording, and you can select any video input that you want to record from.

PIP item is for 2 channels video inputs at the same time, the 2 channels videos will be recorded in one video file at the same time.

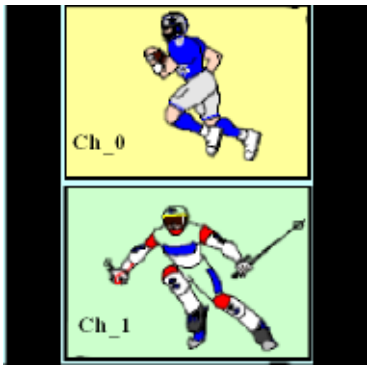
PIP mode supports nine different position beforehand, please consult the **Picture-In-Picture (PIP)** chapter for more details.



H-Split item is for 2 channel video inputs at the same time, the 2 channel videos will be recorded in one video file. **H-Split** item means the 2 channel video inputs array in recording video file horizontally (Left & Right).



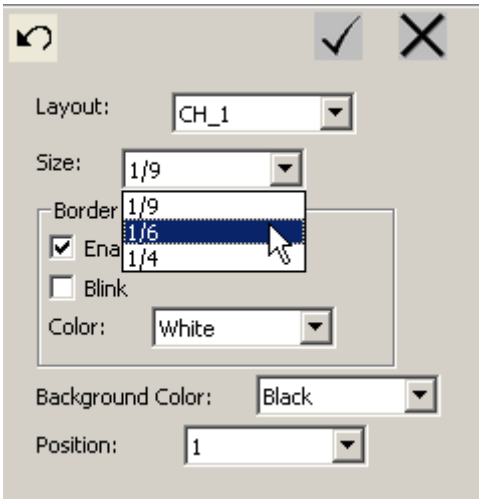
V-Split item is for 2 channel video inputs at the same time, the 2 channel videos will be recorded in one video file at the same time. **V-Split** item means the 2 channel video inputs array in recording video file vertically (Top & Button).



8.3.2 Size of Secondary Video Layout in PIP

When you connect more than one camera & select PIP Layout mode, you can set secondary video signal display as different size that according to your configuration.

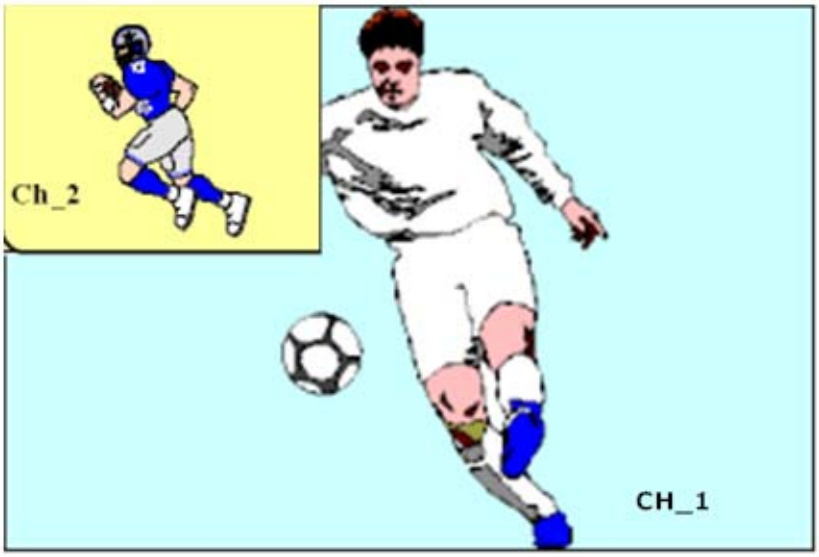
You can set secondary video to one of three sizes: 1/9, 1/6 or 1/4 of full screen.

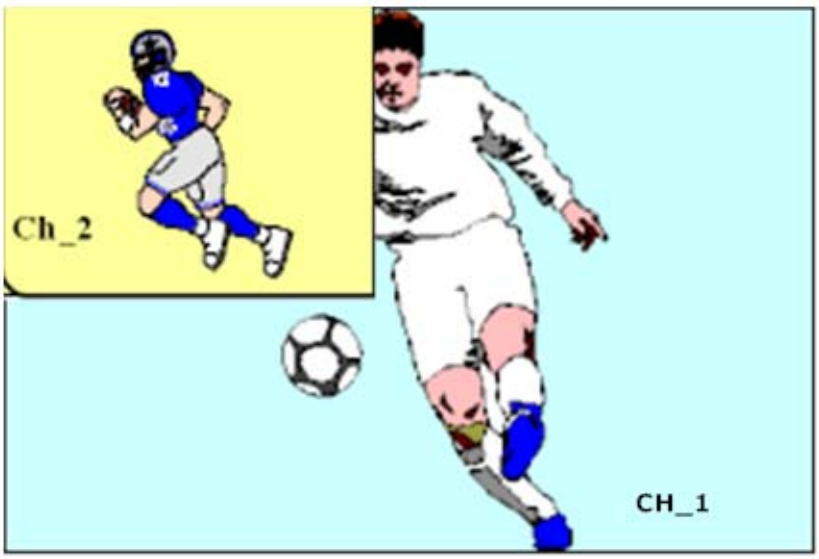


The default size is 1/9 of full screen.

The layout of three sizes as follow:

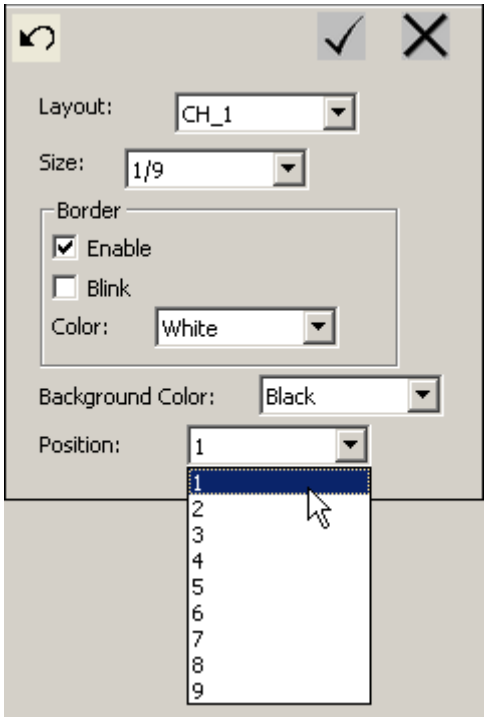

Ch_2
CH_1


Ch_2
CH_1

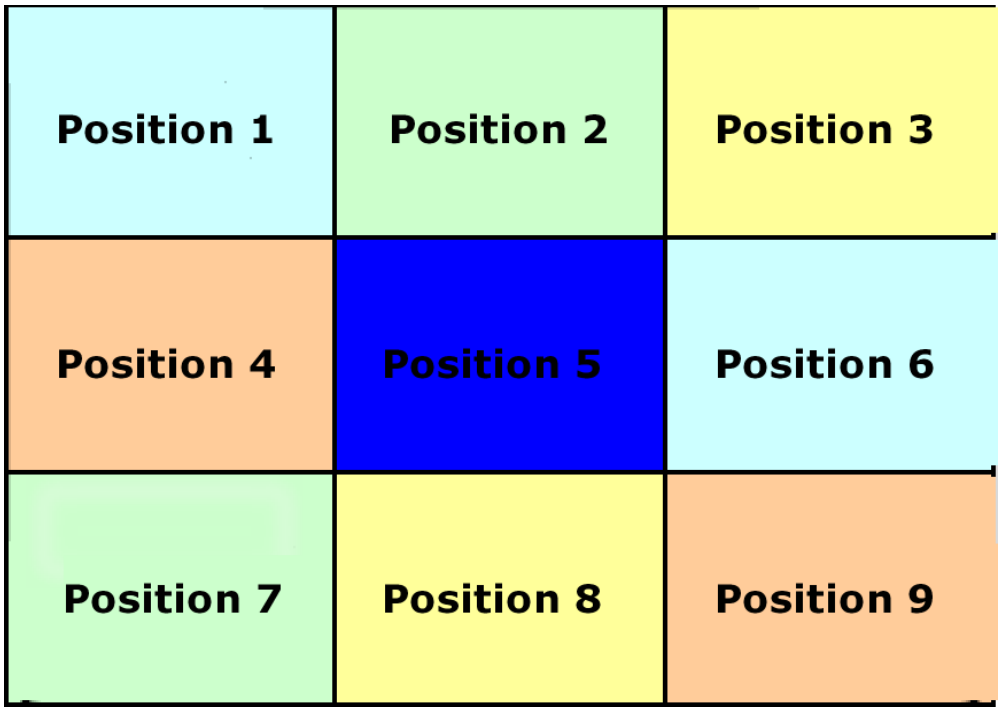

Ch_2
CH_1

8.3.3 Picture-In-Picture (PIP)

You can configure any position for PIP recording video, it has nine different positions, and you can select any position for your requirement from **Position** option.



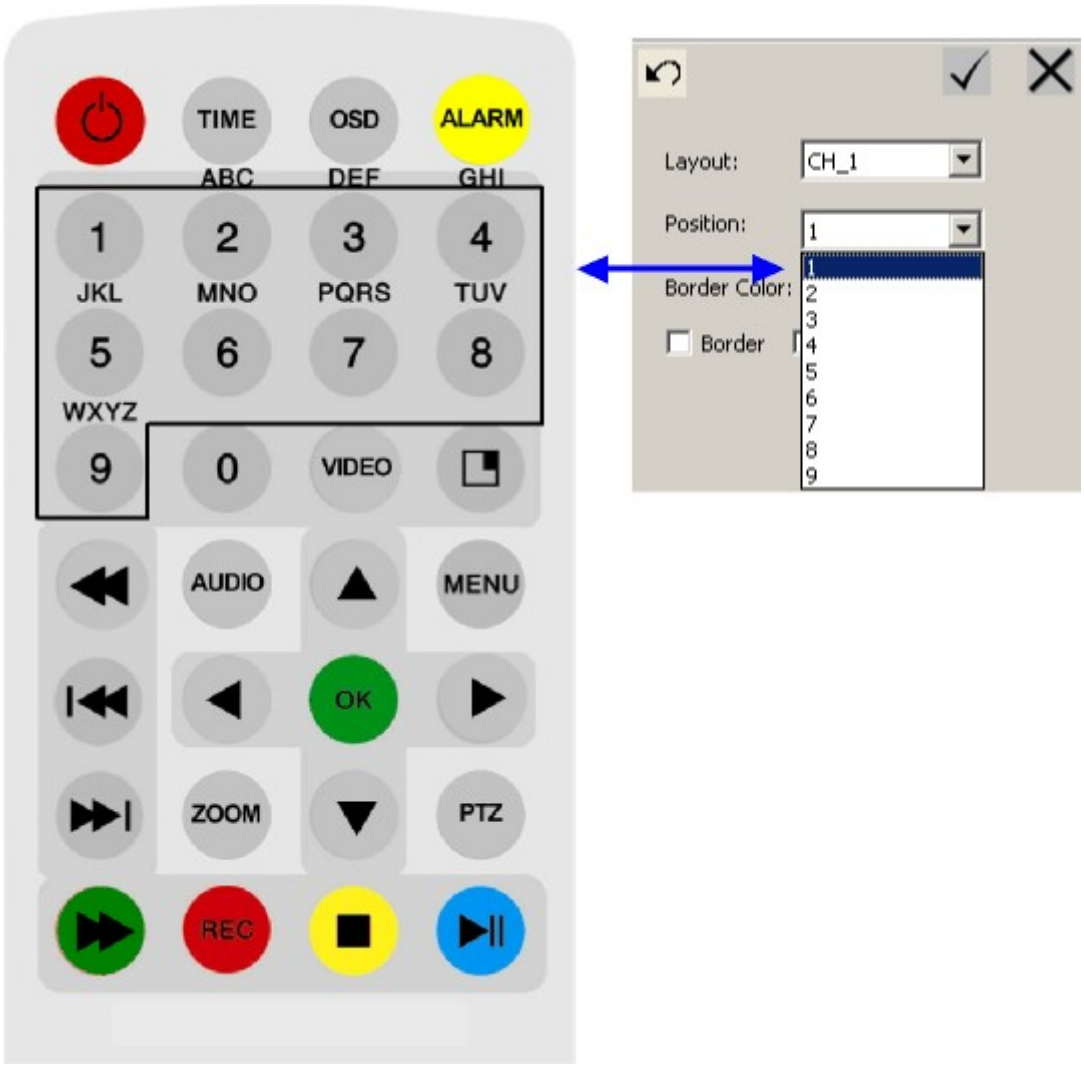
You can configure or switch the array method of Picture-In-Picture via the DR3 Desktop & IR remote controller.



The numeric keys on the IR remote controller is can be programmed with 9 array methods of Picture-In-Picture, you can configure it & select any one array method as your default array using the DR3 Desktop.

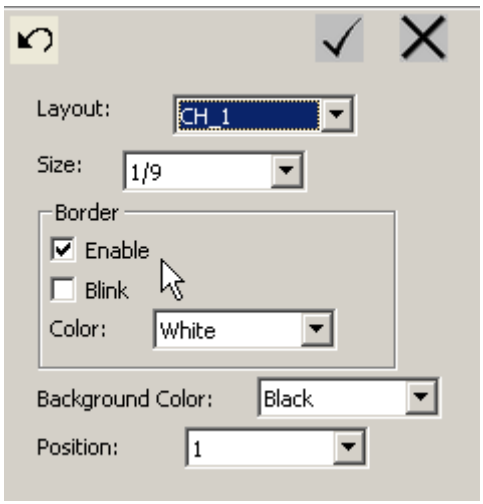
You can switch the array method using the numeric keys on the IR remote controller directly when you record the video using the 2 Channel DR3 . The numeric keys 1~9 is controls the 9 items in the **Position** pull down menu.

Numeric Key on IR remote Controller	Item in Position Menu
1	Position 1
2	Position 2
3	Position 3
4	Position 4
5	Position 5
6	Position 6
7	Position 7
8	Position 8
9	Position 9

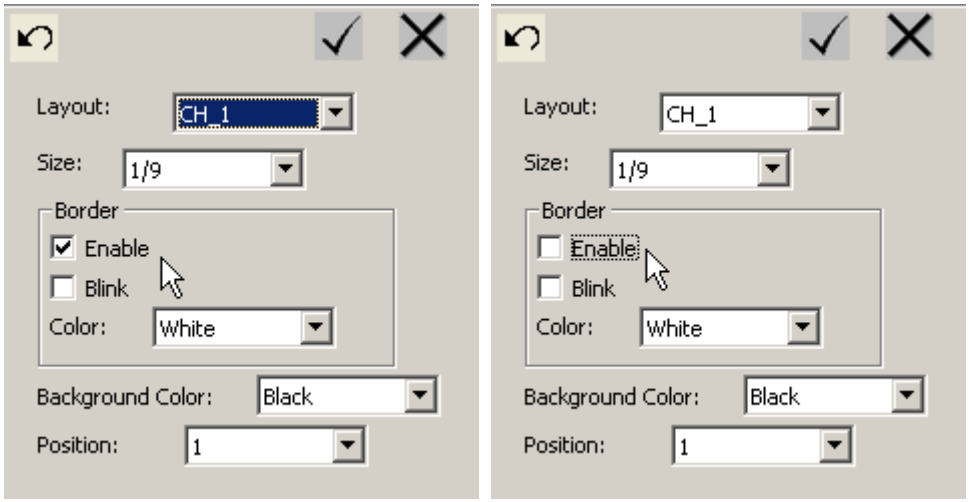


8.3.4 The Border of Frame

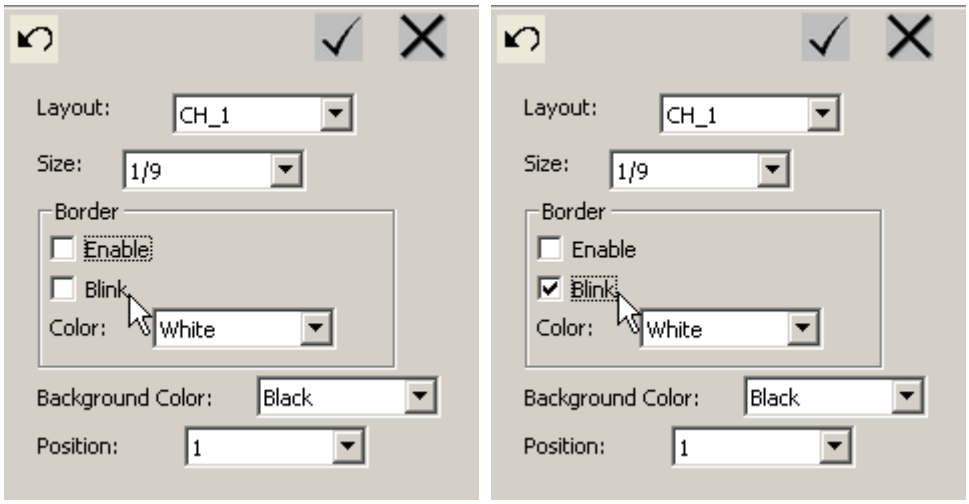
When you use 2 channel video inputs, you can enable/disable or select different styles of frame for a better scene effect.



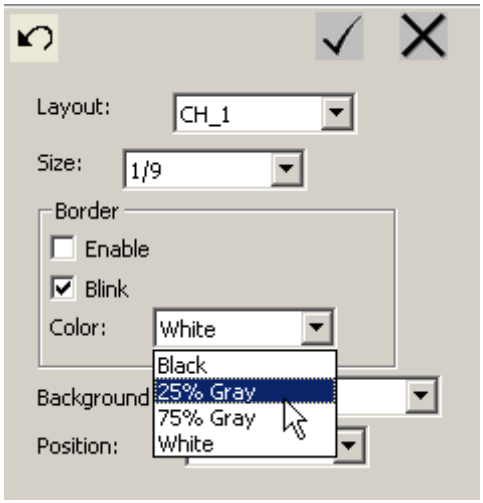
Switch on **Border** option to enable frame of video for Picture-In-Picture function.



At the same time, you can switch on **Border Blink** option to enable frame of video glint.

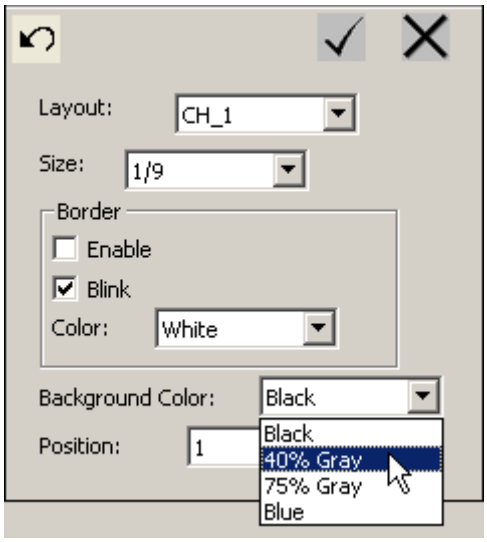


You can select 4 different styles of border frame.



8.3.5 Background Color of Screen

You can select 4 different color of screen background.



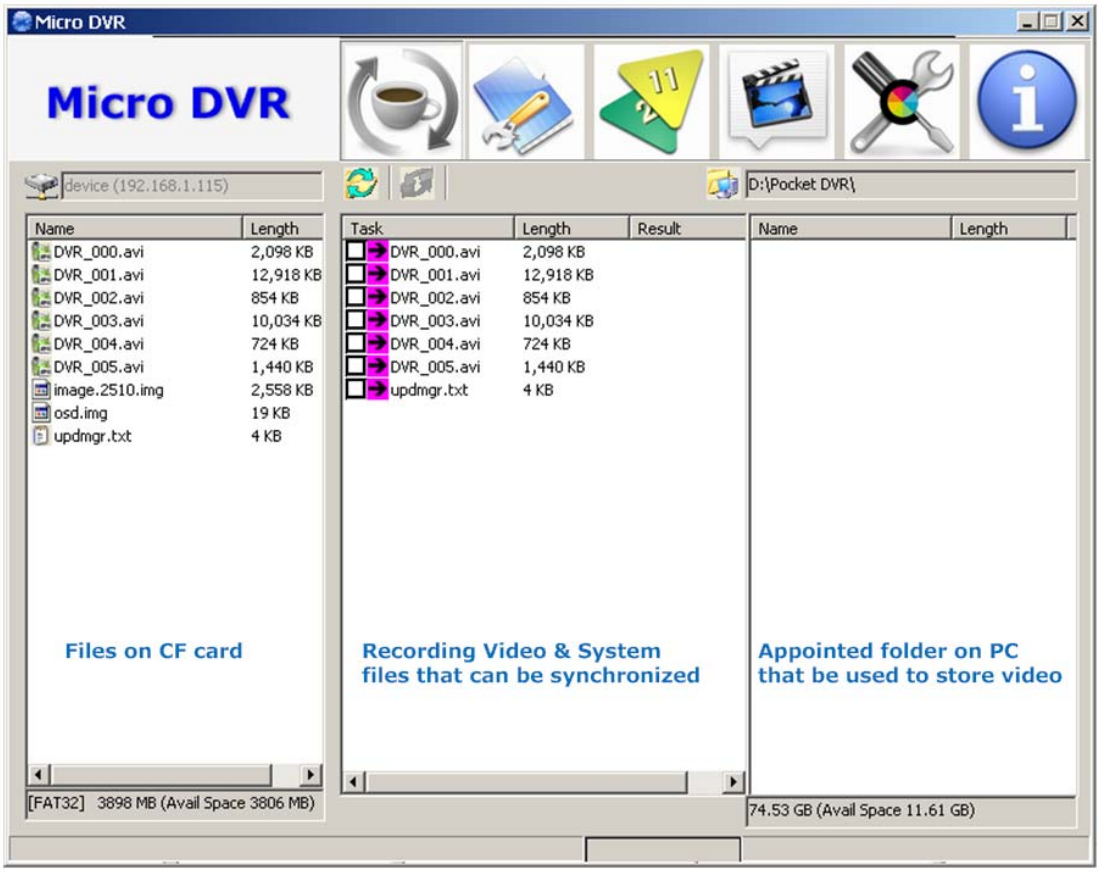
8.3.6 Configuration Menu Output

2 Channel DR3 supports analog output to TV or Monitor, when you connect a TV or Monitor to the Audio/Video Output, you can preview current video & the configure menu.

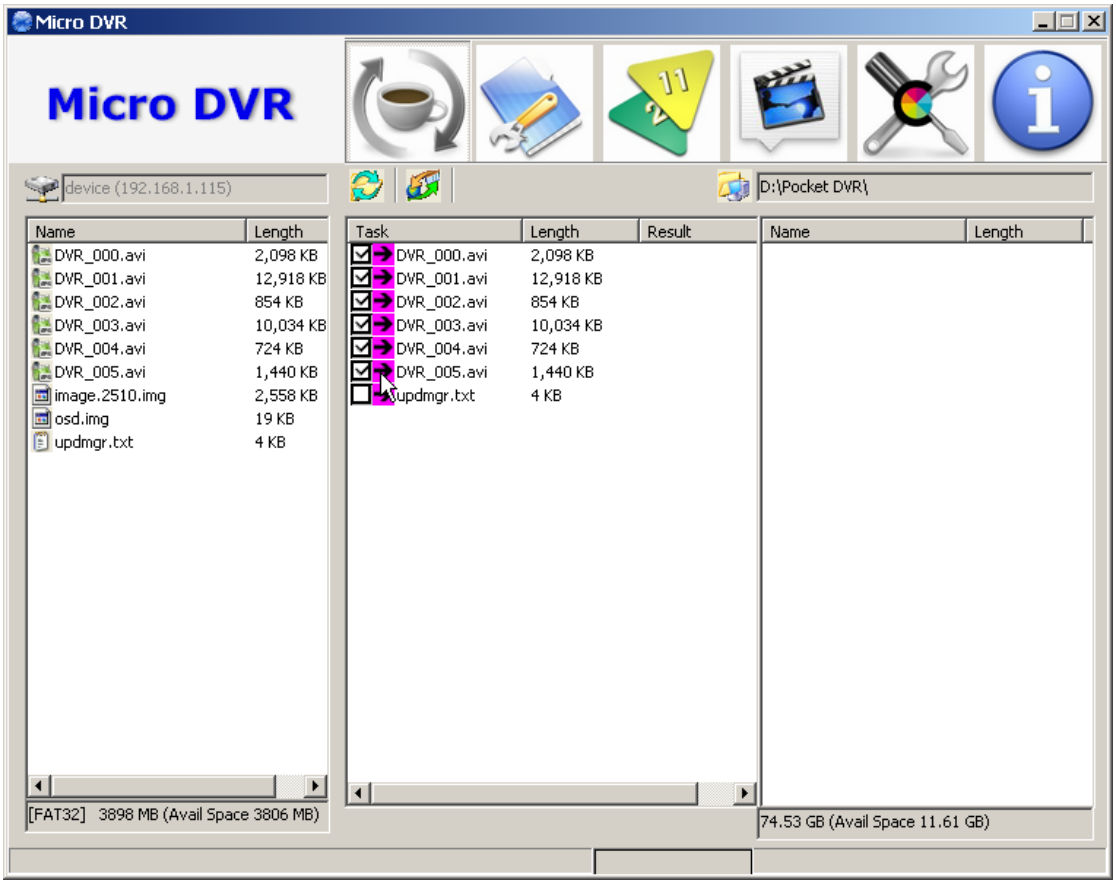
NOTE: This option is only for 2/3/4-Channels DR3 ; it is not supported by 1-CH DR3 .

9. Synchronize Video between CF & PC

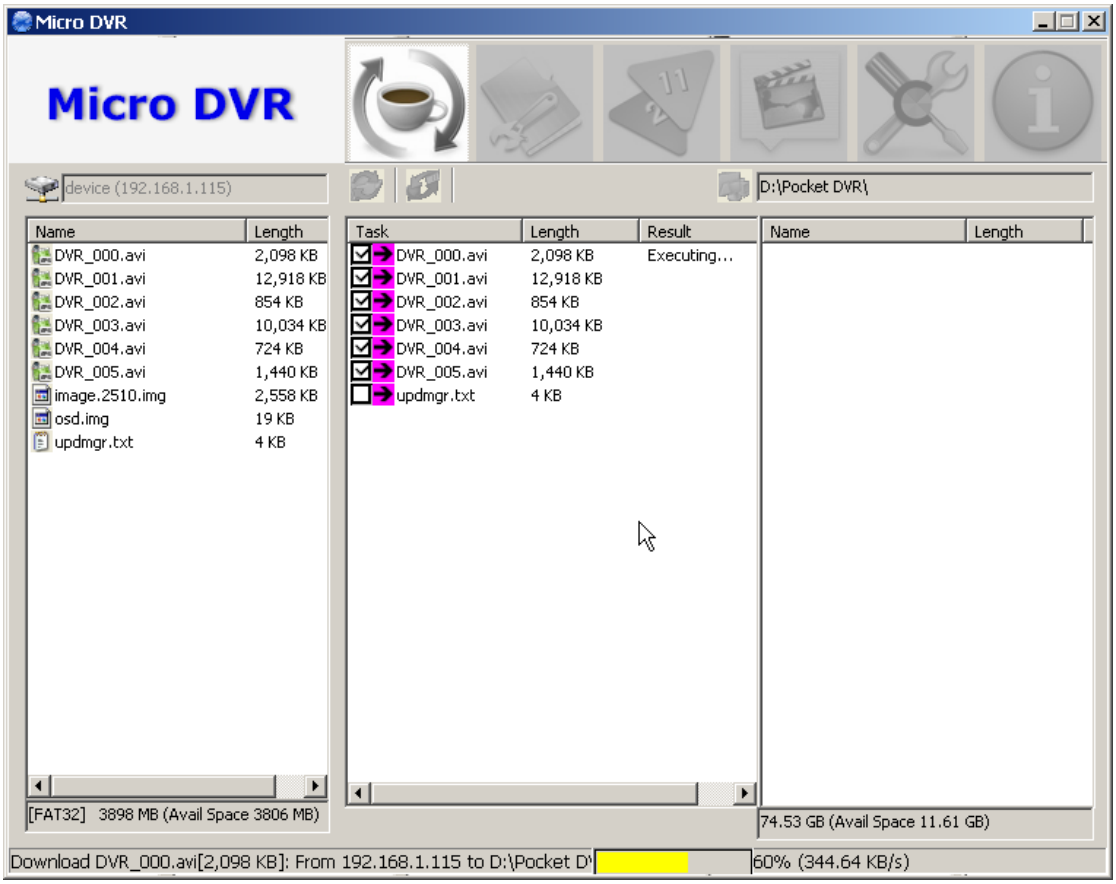
Click **Sync** button  to synchronize the recording video between CF card & PC.

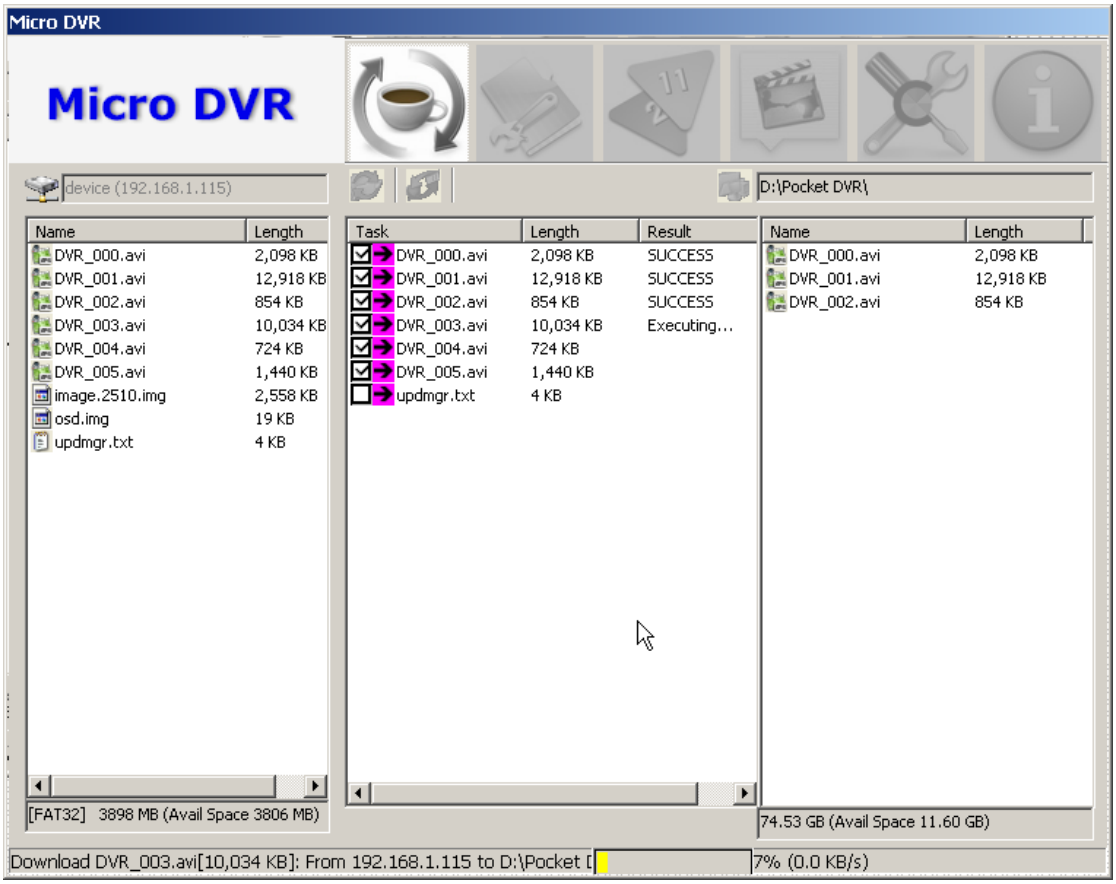


Please select files that you want to synchronize on task column.



After you select all files that you want to synchronize, then click Sync button  to start synchronization.


Micro DVR
Micro DVR
device (192.168.1.115)
D:\Pocket DVR\
Name Length
DVR_000.avi 2,098 KB
DVR_001.avi 12,918 KB
DVR_002.avi 854 KB
DVR_003.avi 10,034 KB
DVR_004.avi 724 KB
DVR_005.avi 1,440 KB
image.2510.img 2,558 KB
osd.img 19 KB
updmgr.txt 4 KB
Task Length Result
DVR_000.avi 2,098 KB Executing...
DVR_001.avi 12,918 KB
DVR_002.avi 854 KB
DVR_003.avi 10,034 KB
DVR_004.avi 724 KB
DVR_005.avi 1,440 KB
updmgr.txt 4 KB
Name Length
[FAT32] 3898 MB (Avail Space 3806 MB)
74.53 GB (Avail Space 11.61 GB)
Download DVR_000.avi[2,098 KB]: From 192.168.1.115 to D:\Pocket D\
60% (344.64 KB/s)


Micro DVR
Micro DVR
device (192.168.1.115)
D:\Pocket DVR\
Name Length
DVR_000.avi 2,098 KB
DVR_001.avi 12,918 KB
DVR_002.avi 854 KB
DVR_003.avi 10,034 KB
DVR_004.avi 724 KB
DVR_005.avi 1,440 KB
image.2510.img 2,558 KB
osd.img 19 KB
updmgr.txt 4 KB
Task Length Result
DVR_000.avi 2,098 KB SUCCESS
DVR_001.avi 12,918 KB SUCCESS
DVR_002.avi 854 KB SUCCESS
DVR_003.avi 10,034 KB Executing...
DVR_004.avi 724 KB
DVR_005.avi 1,440 KB
updmgr.txt 4 KB
Name Length
DVR_000.avi 2,098 KB
DVR_001.avi 12,918 KB
DVR_002.avi 854 KB
[FAT32] 3898 MB (Avail Space 3806 MB)
74.53 GB (Avail Space 11.60 GB)
Download DVR_003.avi[10,034 KB]: From 192.168.1.115 to D:\Pocket [
7% (0.0 KB/s)

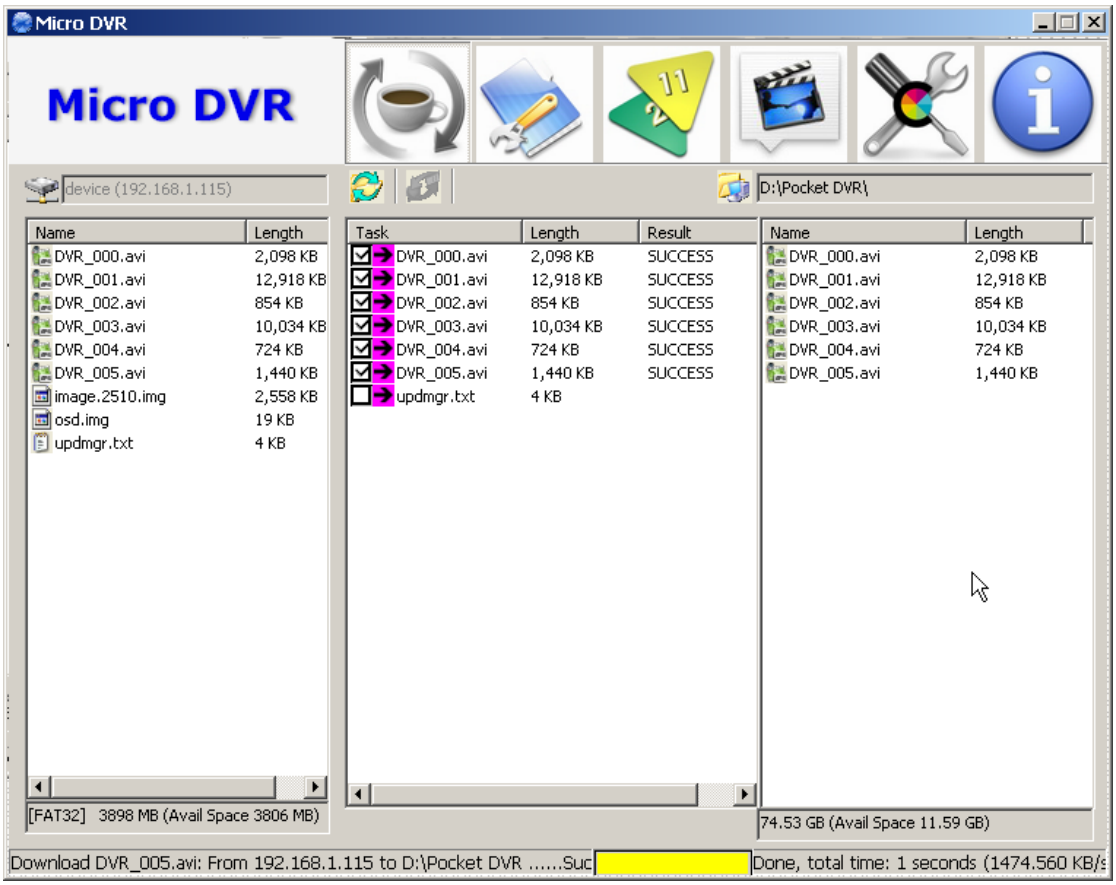
In task column, the result item will display status of files.

If you startup Desktop software via CF card, Desktop will display CF card on PC on button status bar, if you connect DR3 to PC via LAN connection, the IP address will be display on button status bar.

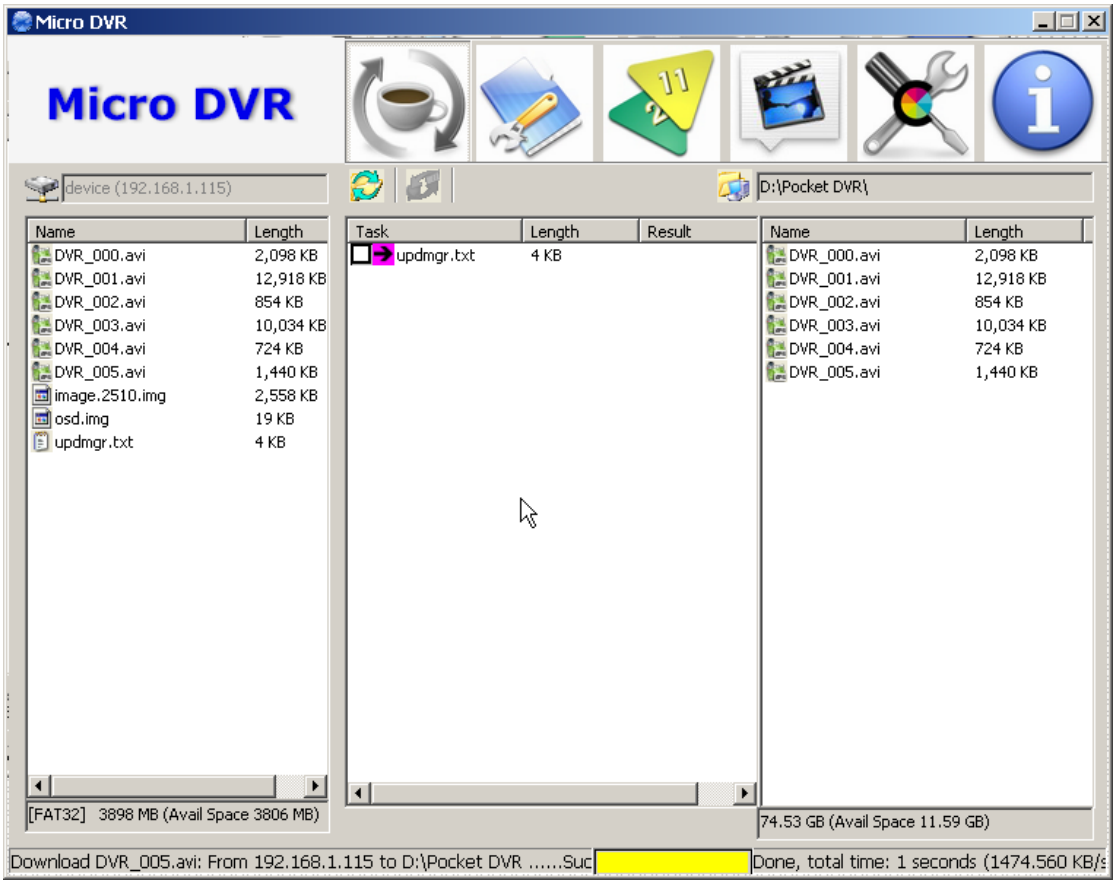
Executing… means the files being synchronizing, **SUCCESS** means the files had been synchronized successfully.

When a file being synchronizing, the yellow status bar will display on the button.

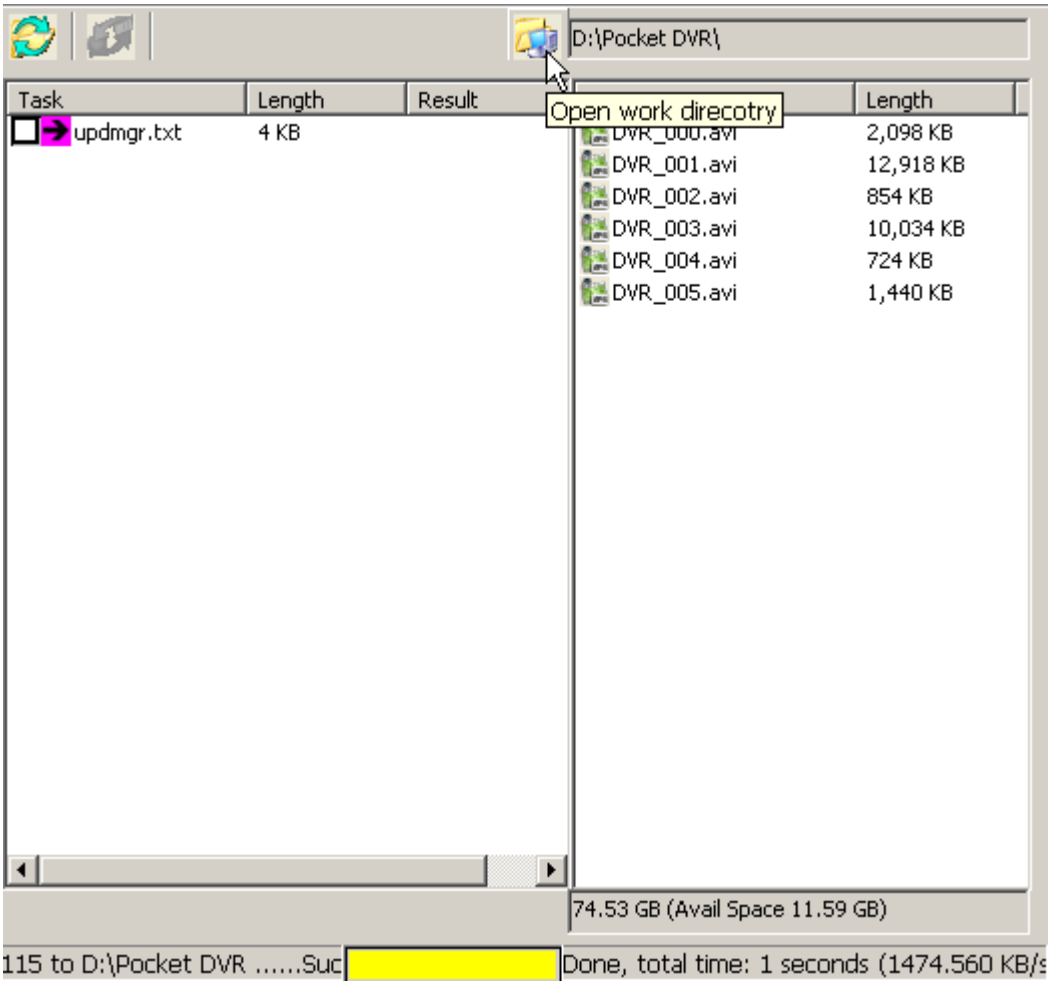
After all files are synchronized successfully, files will be synchronized to the folder on PC, you will find these files on the working folder column.



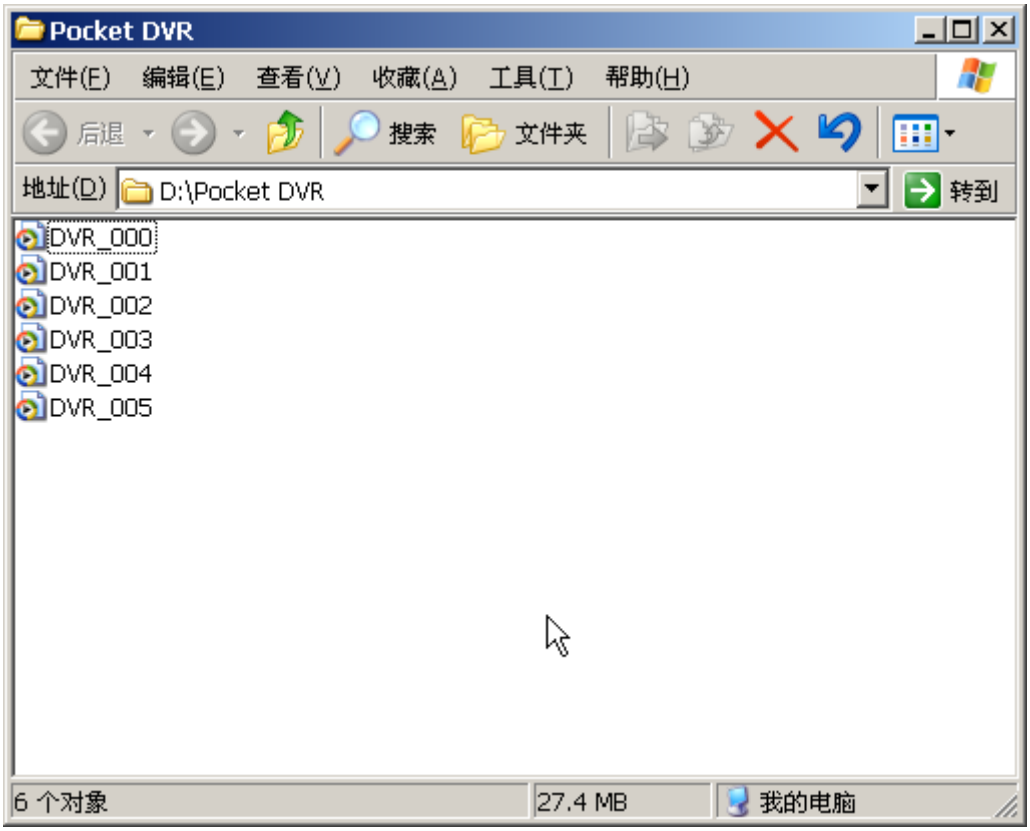
After synchronization, you can click refresh button  to refurbish task column.



Click  to open working folder on PC.

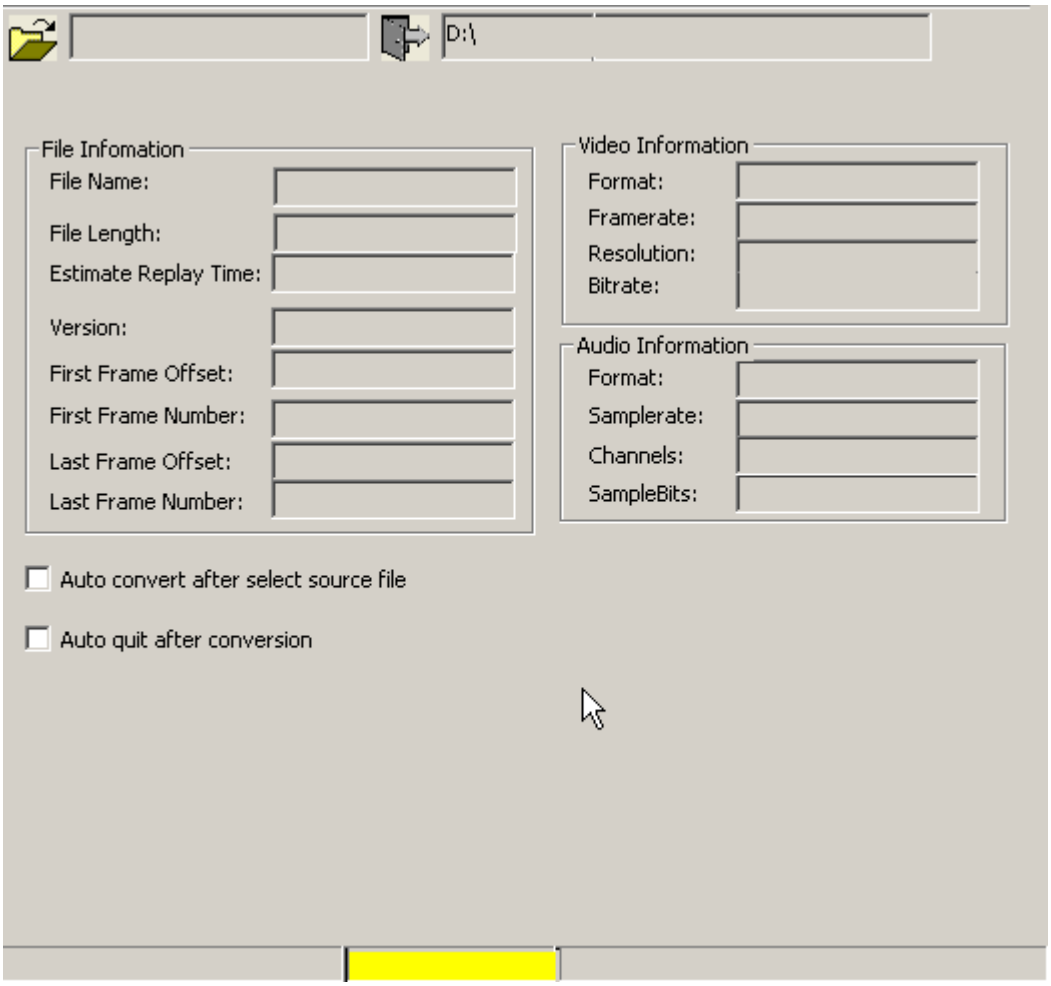


In synchronization, the .csf MPEG-2 recording file will be converted to standard MPEG-2 video automatically.


Pocket DVR
文件(F) 编辑(E) 查看(V) 收藏(A) 工具(T) 帮助(H)
后退
搜索
文件夹
地址(D) D:\Pocket DVR
转到
DVR_000
DVR_001
DVR_002
DVR_003
DVR_004
DVR_005
6 个对象
27.4 MB
我的电脑

10. MPEG-2 Converter

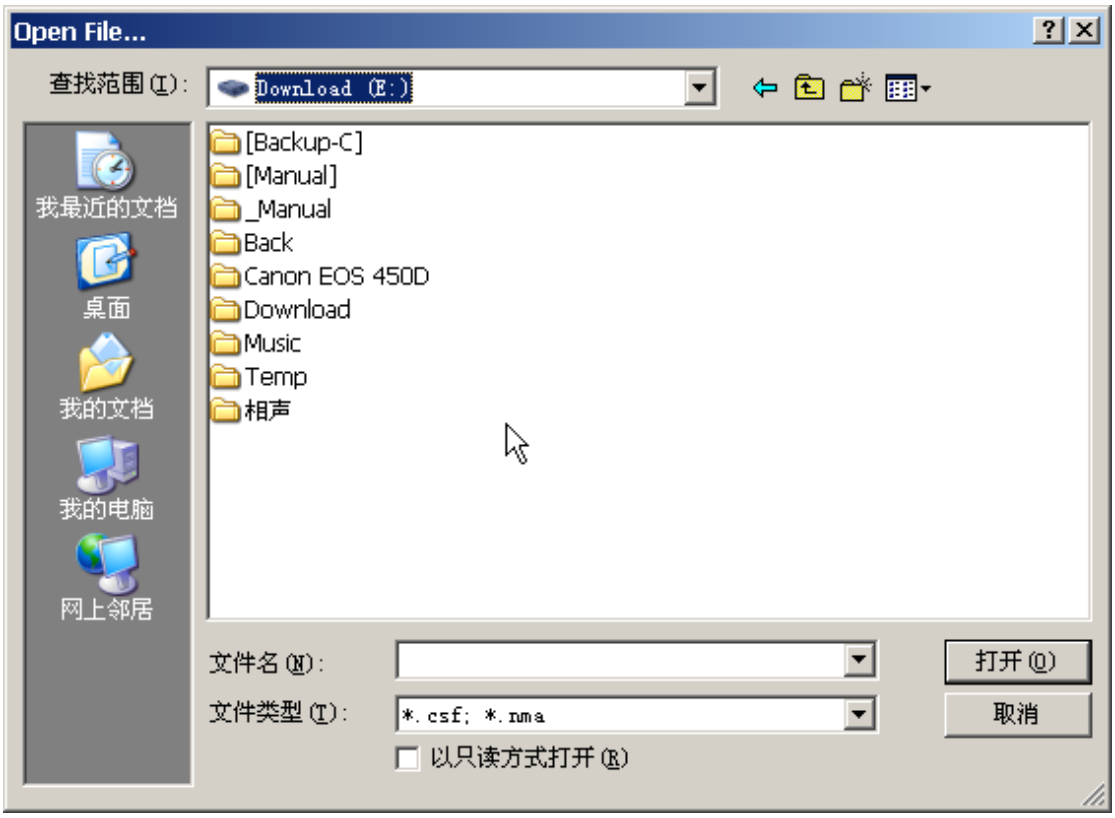
Click **Conversion** button  to render MPEG-2 recording video manually.



Recorded MPEG-2 file have to be converted to standard MPEG-2 video for later video replay, edit & burn. The conversion of MPEG-4 is not required.

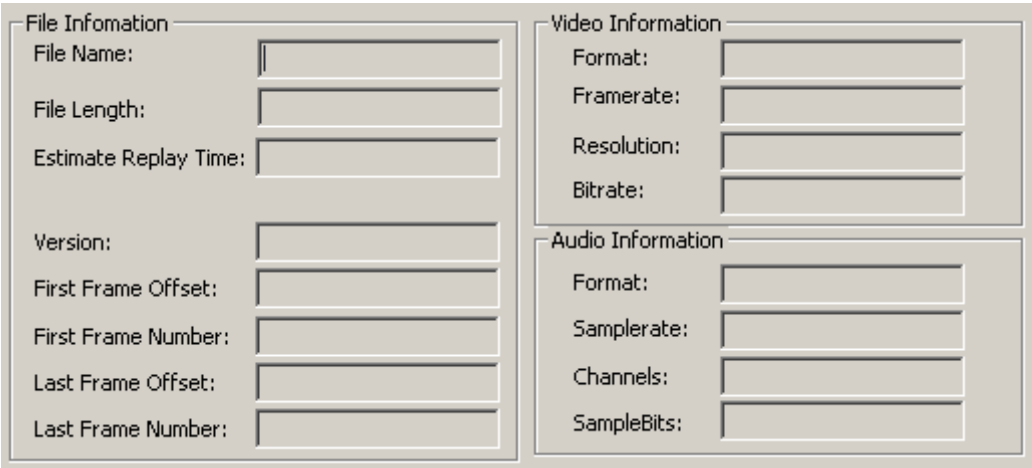
Sometime maybe you copy many .csf MPEG-2 recording files to PC, and then convert them manually.

Click  to open working folder on PC that you save .csf MPEG-2 files.



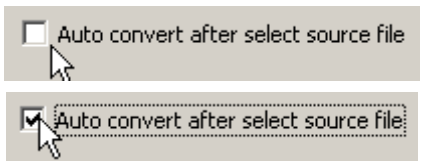
Then select .csf file that you want to convert.

After you select the source file to convert, detailed information of the recorded MPEG-2 video will be displayed.



Click  to convert the .csf file that you select.

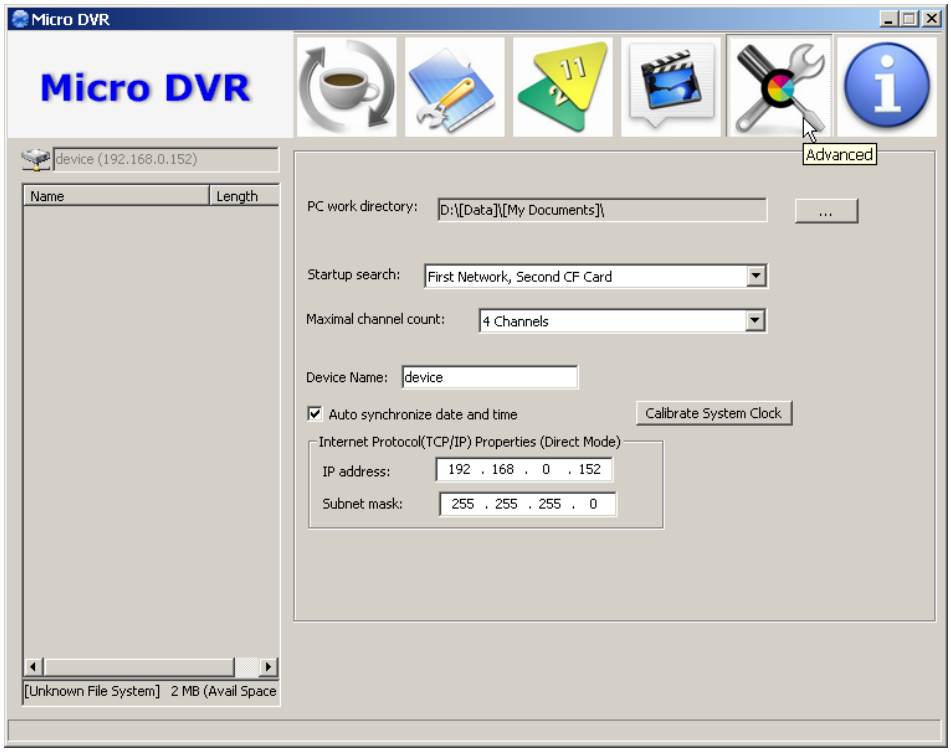
The file can be converted automatically after you select the file if you enable automatically convert option.

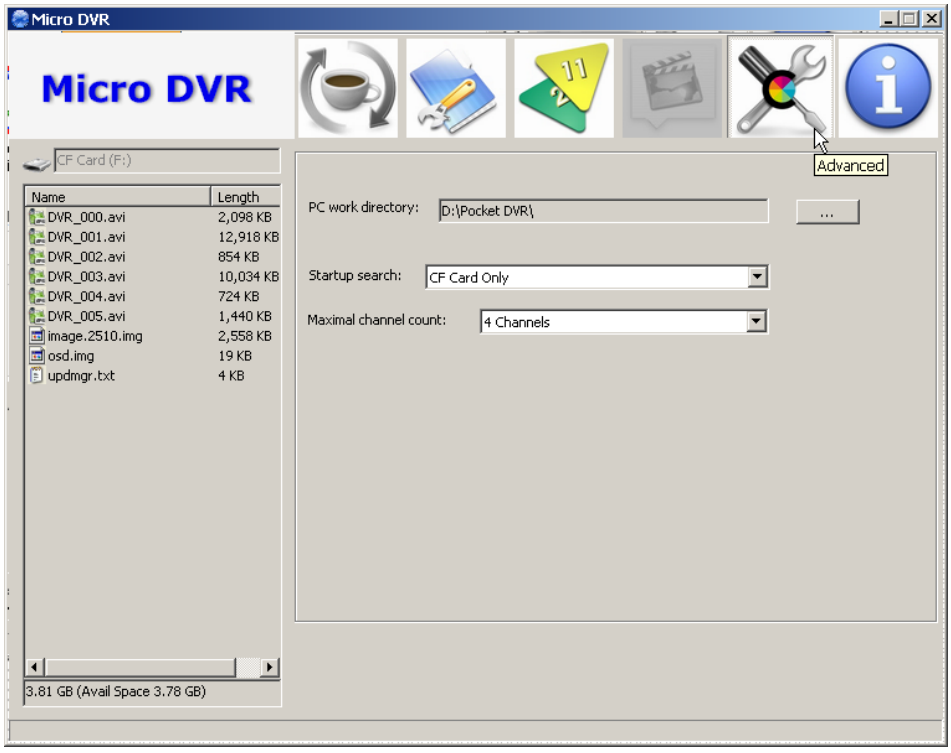


For better performance of conversion, it is recommended that source file is on the CF card in a card reader and target file is on the hard disk.

11. Advanced Configuration

Click **Advanced Configuration** button  to configure system environment.

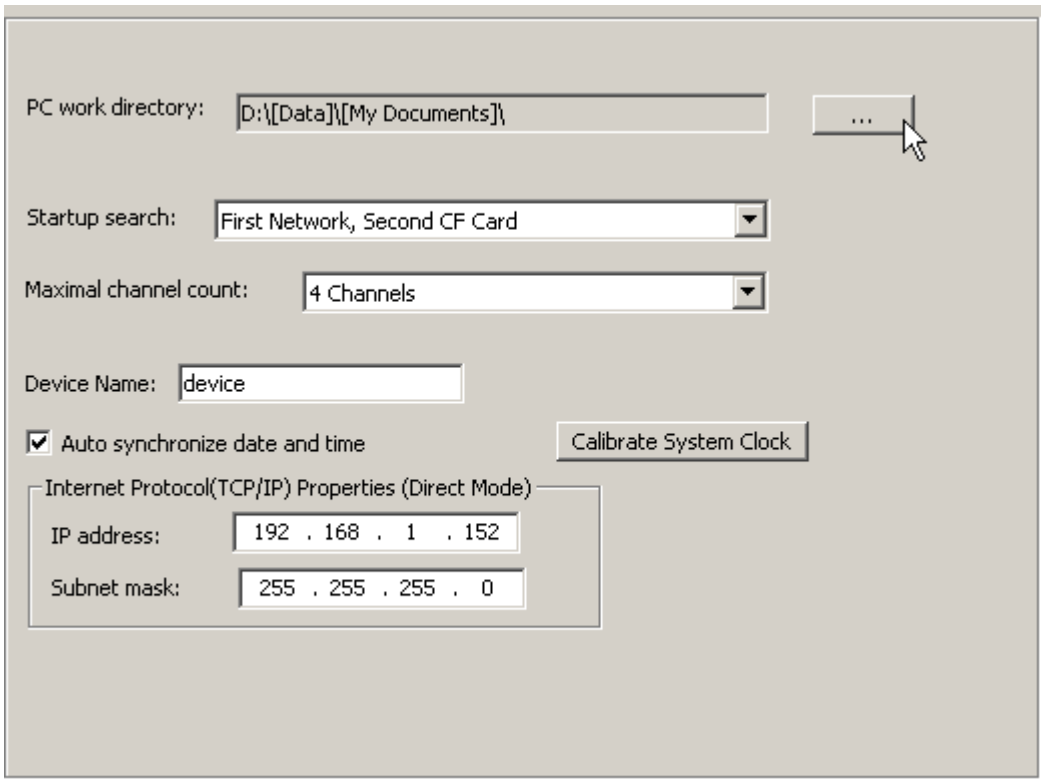




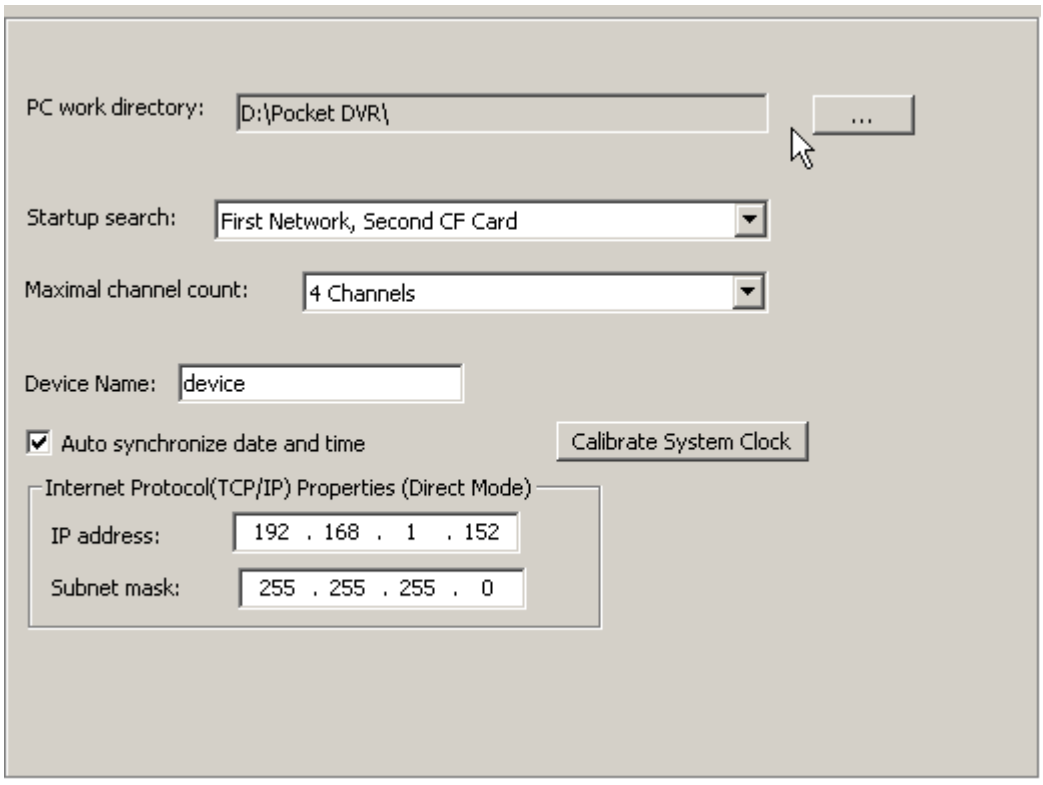
You can select working directory on PC to as synchronize folder, set search sequence for startup, change network configuration of DR3 , sync date & time, and calibrate DVR system clock.

11.1 Change Synchronize Folder

Click [...] button to select working directory on PC to as synchronize folder.



Click **OK** button to confirm your selection.



11.2 Configure Desktop Startup Method

DR3 Desktop will detect Network connection between DR3 & PC in first, if Desktop can't detect valid network connection, then it will detect CF card that you want to used in DR3 , please connect CF card to PC via card reader before you start DR3 Desktop if you don't want to connect DR3 to PC via LAN.

The default sequence of DR3 Desktop is detecting valid network connection between DR3 & PC in first, then detect CF card if it can't find any valid net work connection. Certainly, you can change the default detection method in DR3 Desktop software.

11.2.1 Startup Desktop software via Network Connection

Connect Network Sync cable that in package between DR3 & PC or switch/Router in first, then double click  to start-up DR3 Desktop.

DR3 Desktop will search valid network connection.

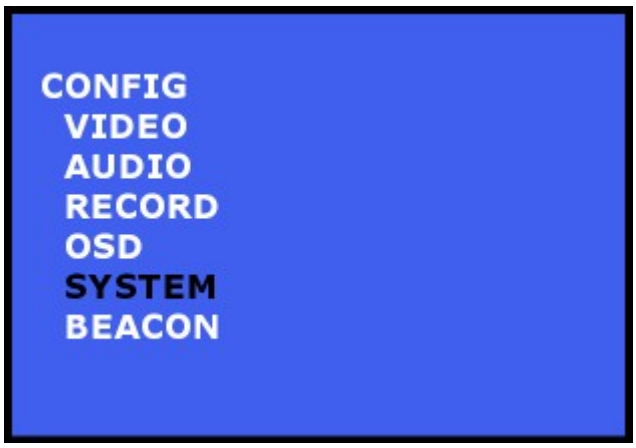
After DR3 Desktop detects valid network connection, it wills start-up successfully.

The default IP address of DR3-S1s 192.168.0.152, please ensure your PC on same IP segment for first connection. If yours PC & DR3 with different IP address segment, Desktop software will prompt you.

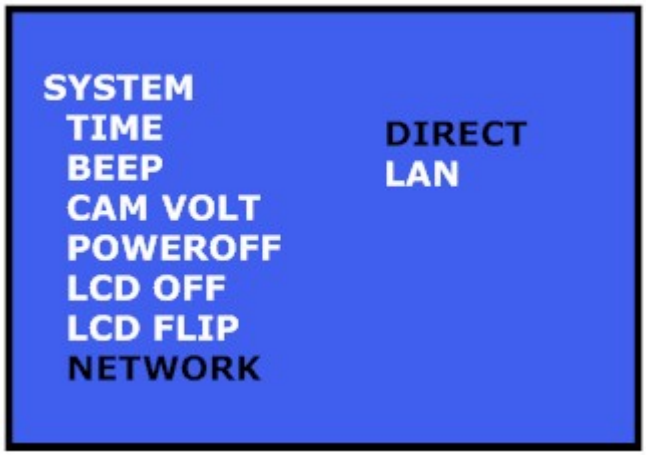
You can change IP address of your PC to same IP segment with DR3 , such as 192.168.0.100, and then restart Desktop software again.

When you connect DR3 to your PC for the first time, please configure DR3 & PC as follow:

8. Change the your PC IP address to 192.168.0.100
9. Connect DR3 to PC via network connection cable
10. Power on DR3
11. Enter DR3 LCD Menu, select **SYSTEM** menu



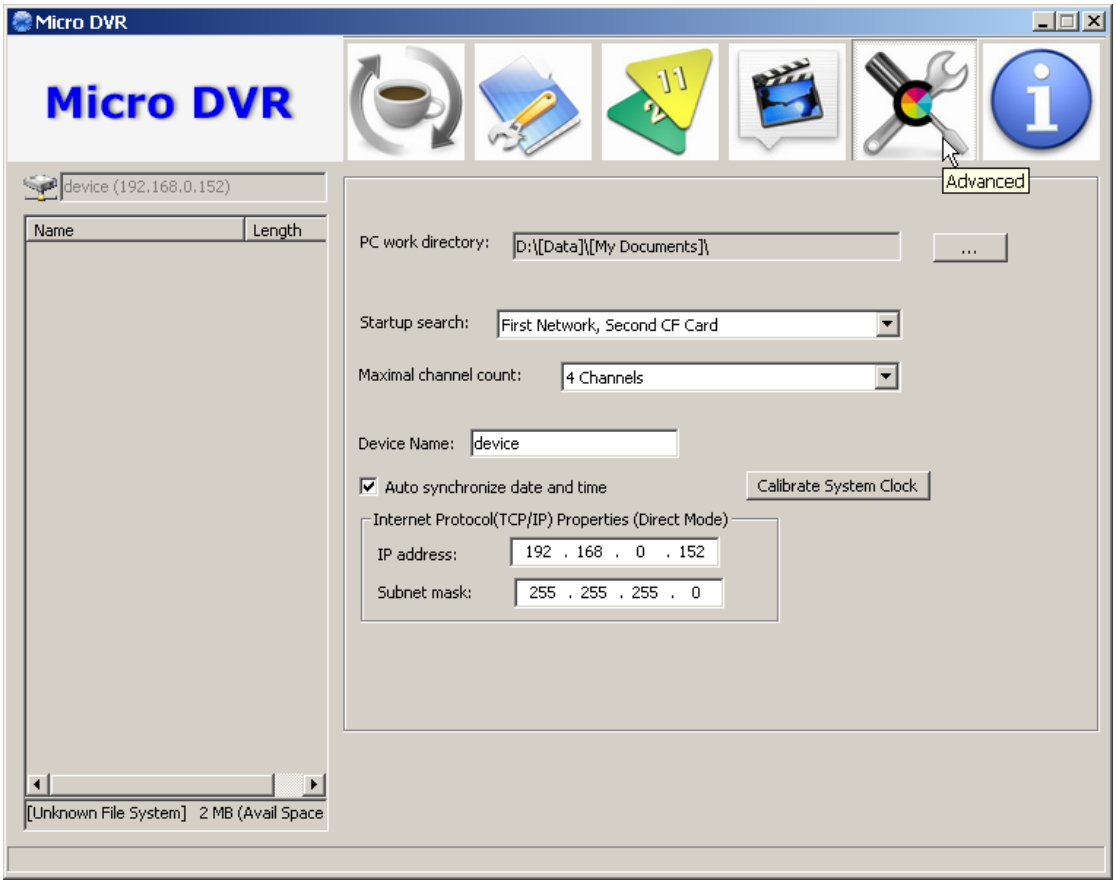
12. Enter SYSTEM menu, then select **NETWORK** item, set DR3 to **DIRECT** connection



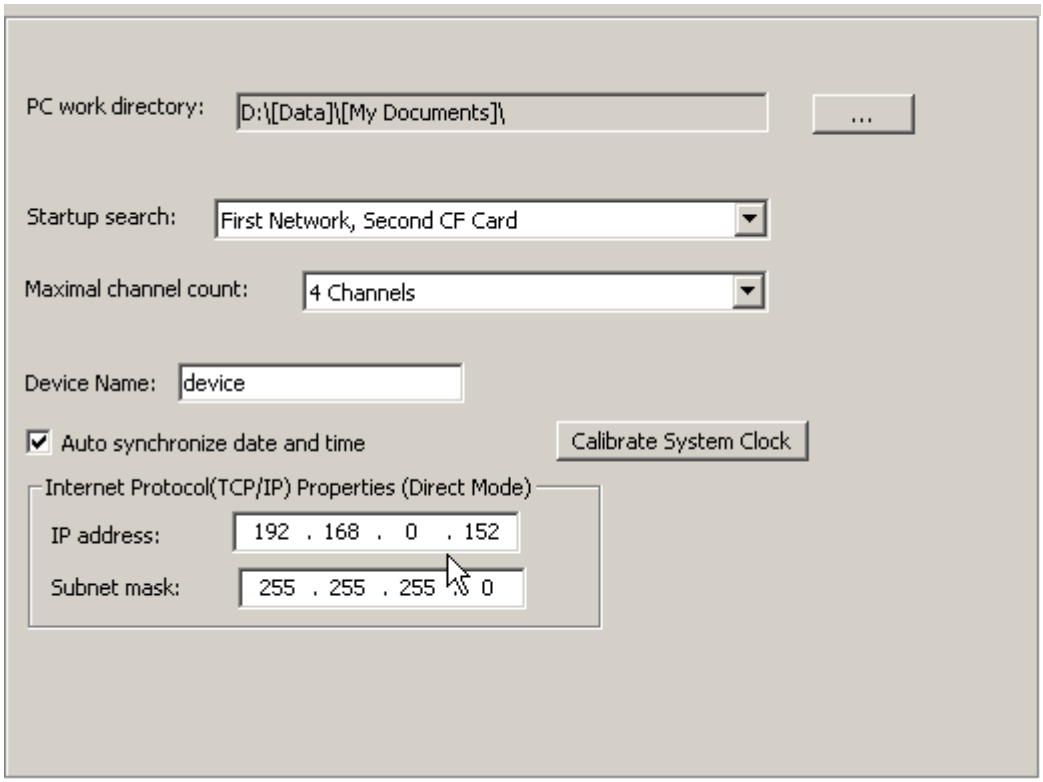
13. Save configuration
14. Start DR3 Desktop software

After you startup Desktop software successfully, you can change IP address of DR3 to same IP segment with your local LAN.

Click **Advanced Configuration** button  to configure network environment of DR3 connection.

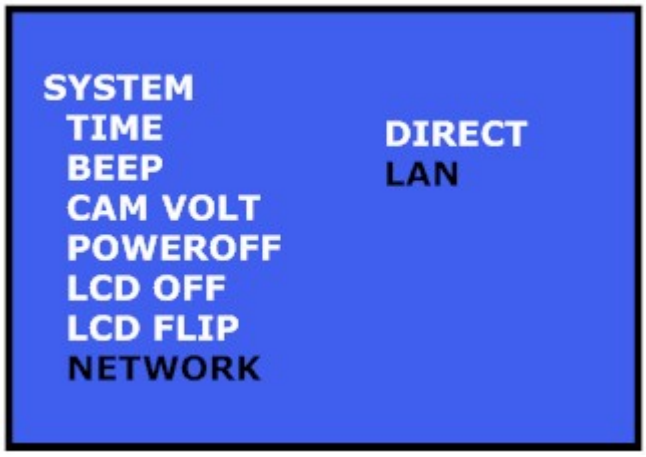


You can change IP address of DR3 manually.



Or you can let DR3 obtain IP address from DHCP server on your local LAN if you connect DR3 to router or switch. But please notice, the router or switch that be connected DR3 must support MDI/MDI-X connection.

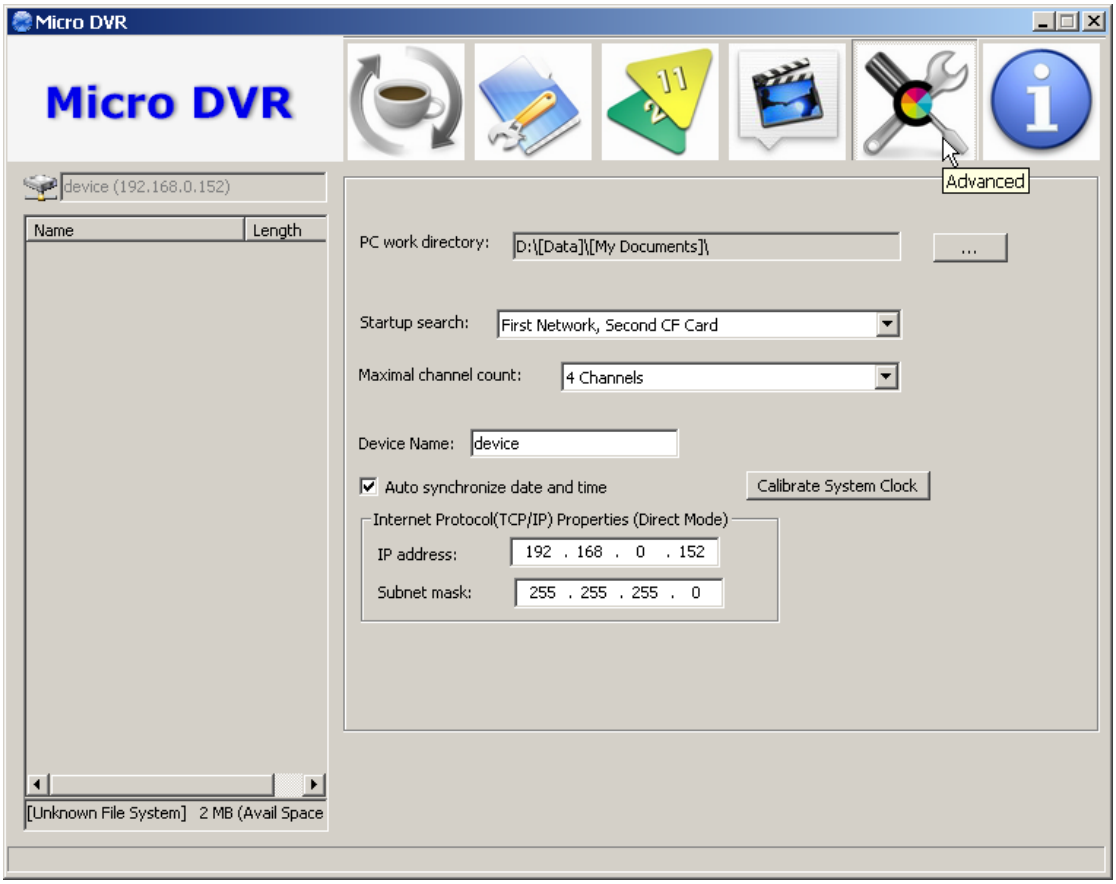
To let DR3 obtain IP address from DHCP server on your local LAN, please set DR3 connection method to LAN.



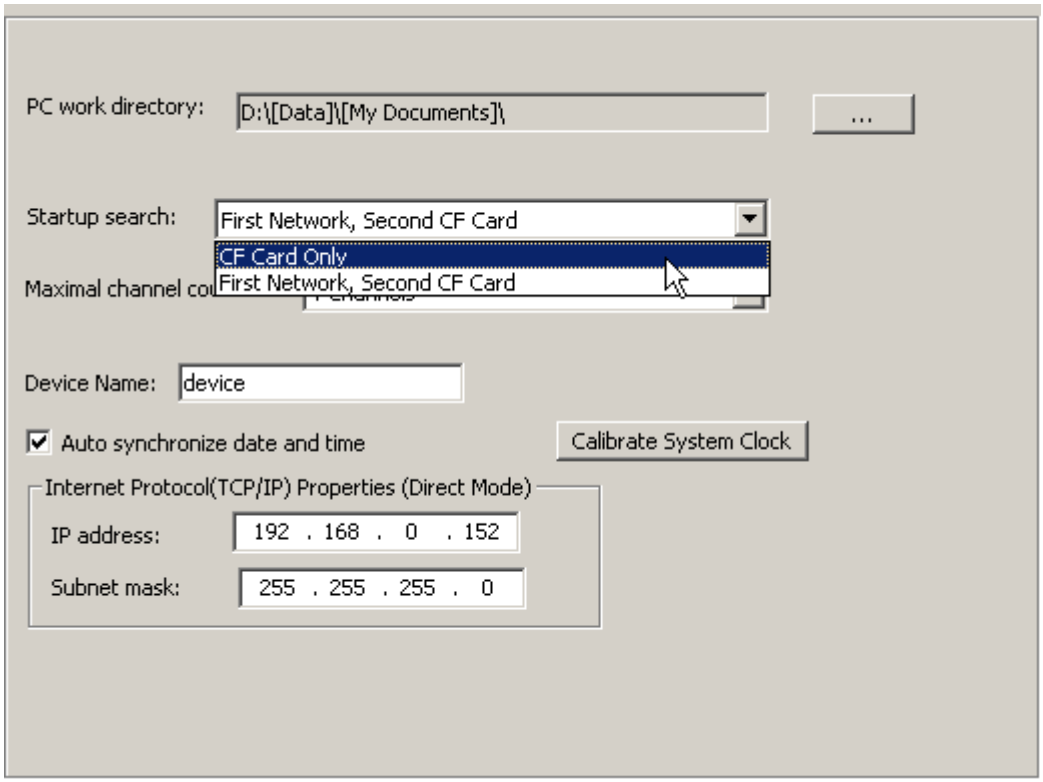
11.2.2 Startup Desktop software via CF card Connection

Change **Startup Search** option from default configuration to **CF Card only**, then you can startup DR3 Desktop via CF card that connect to PC without network connection.

Click **Advanced Configuration** button  to configure connection configuration.



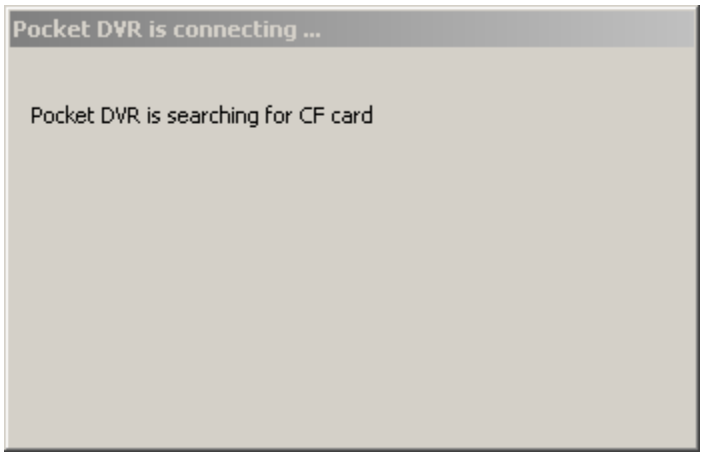
Then set **Startup Search** option to **CF Card Only** item.



After you configure it, you can startup Desktop software only via CF card without network connection for the future.

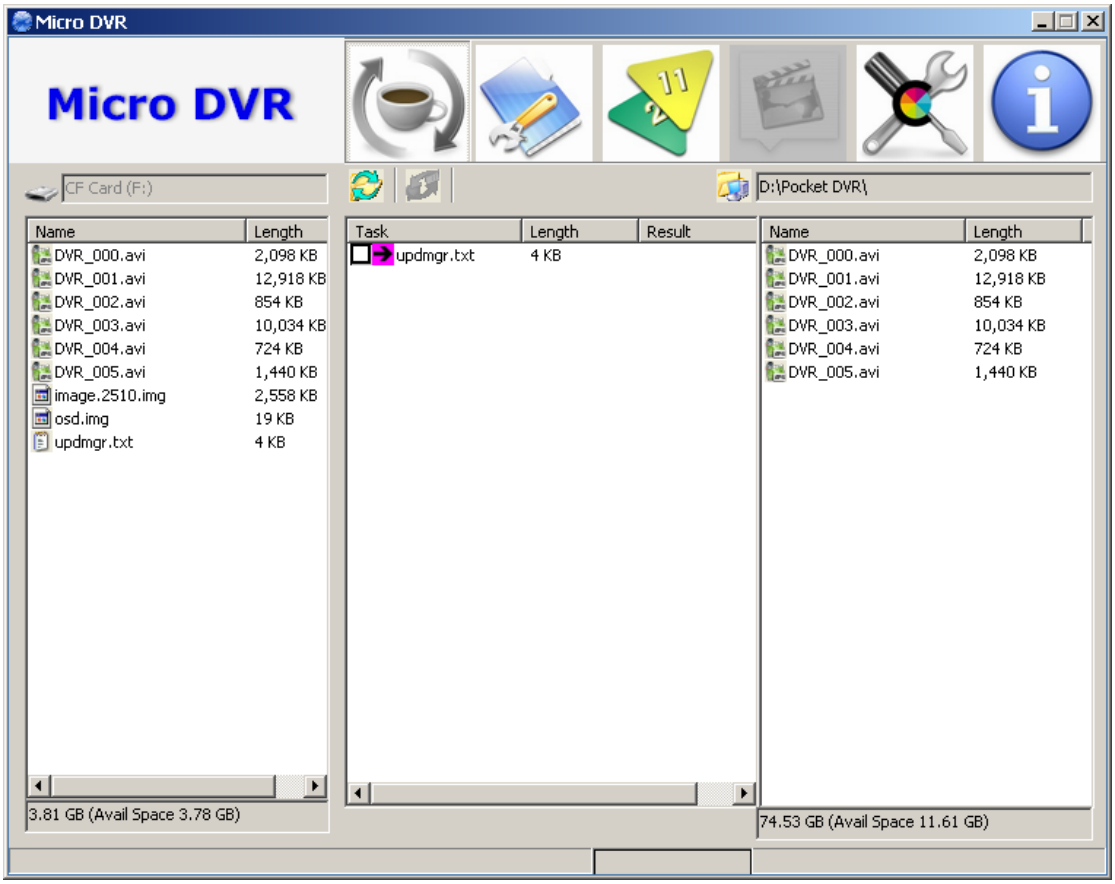
Connect CF card to PC via card reader in first, then double click  to start-up DR3 Desktop.

DR3 Desktop will search CF card on PC.



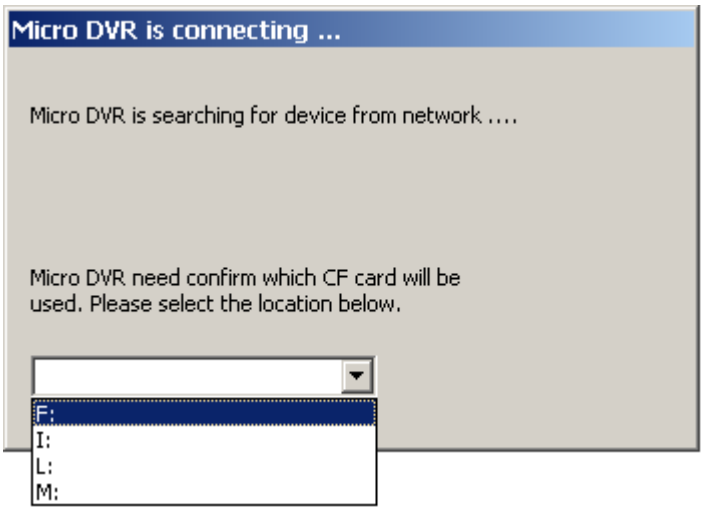
If CF card can't be connected to PC correctly or no CF card be connected to PC, DR3 Desktop will display error message to prompt you connect CF card to PC correctly.

If CF card that you connect to PC had been used in DR3 or be initialized by DR3 Desktop, DR3 Desktop will detect the DEVICE.INI file on the root directly of CF card, and DR3 Desktop will start-up automatically.

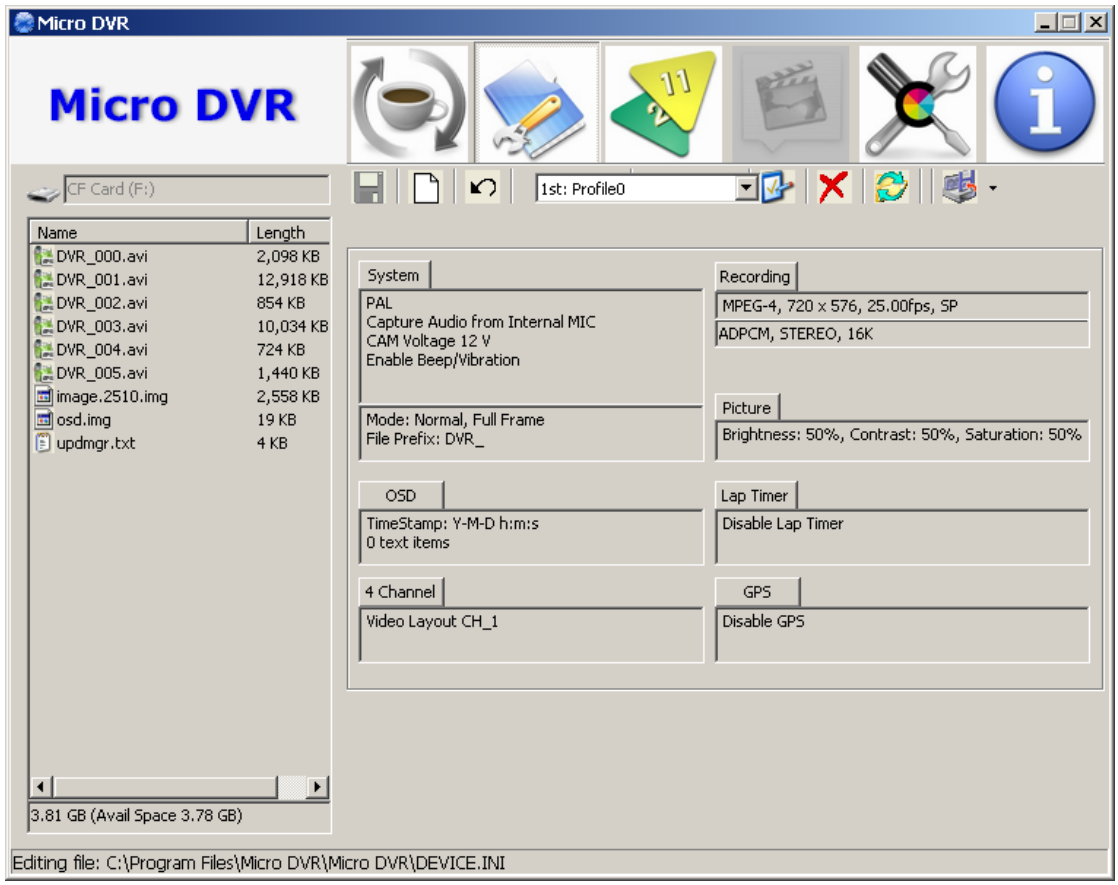


If DR3 Desktop detect a new CF card, system will prompt you select a correctly disk that point to CF card.

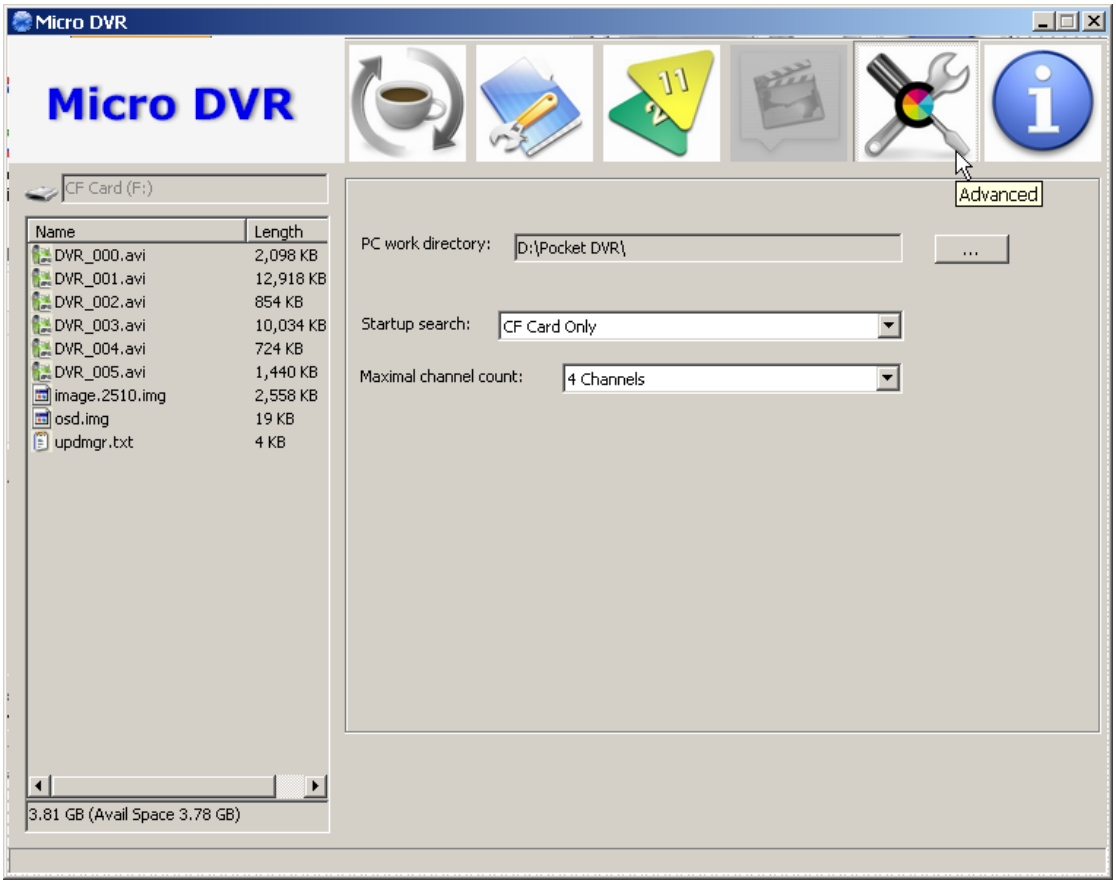
After you select correctly disk, DR3 Desktop will initialize CF card and create DEVICE.INI configuration file on root of CF card automatically.



Once DR3 Desktop finished initialization, it wills start-up automatically.

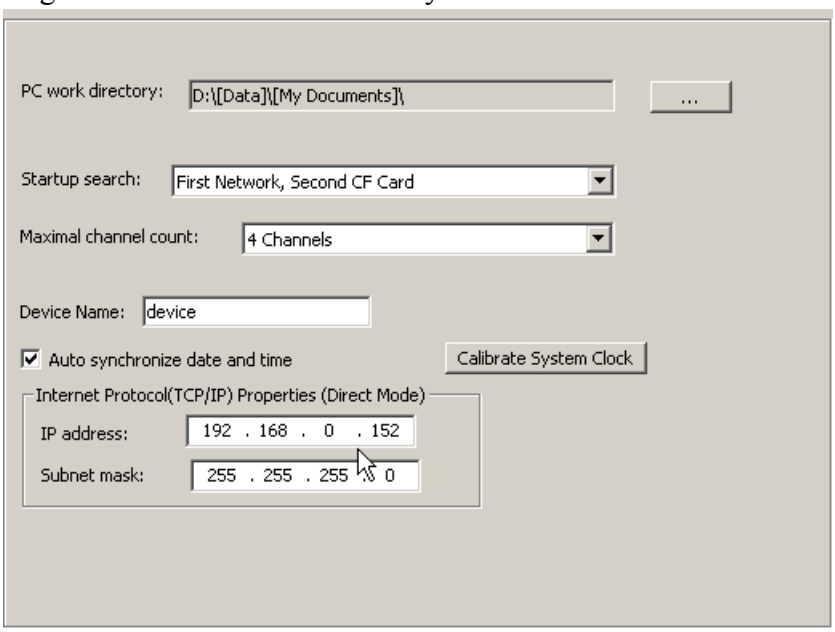


Some functions are active when Desktop software startup via network connection of DR3 only, because without network connection, you can't sync/operate DR3 online.



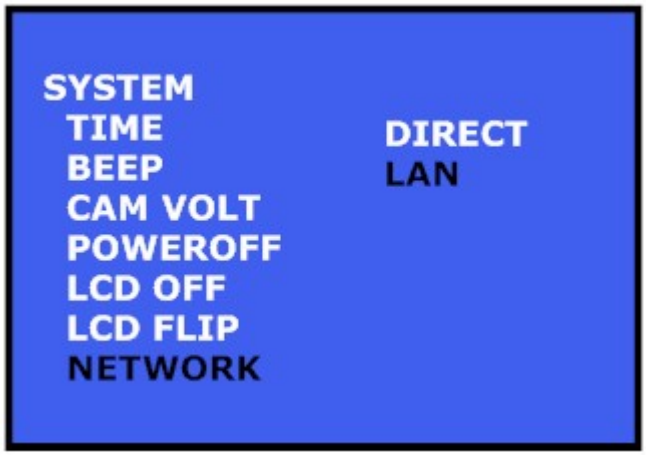
11.3 Configure Network Configuration of DR3

You can change IP address of DR3 manually.



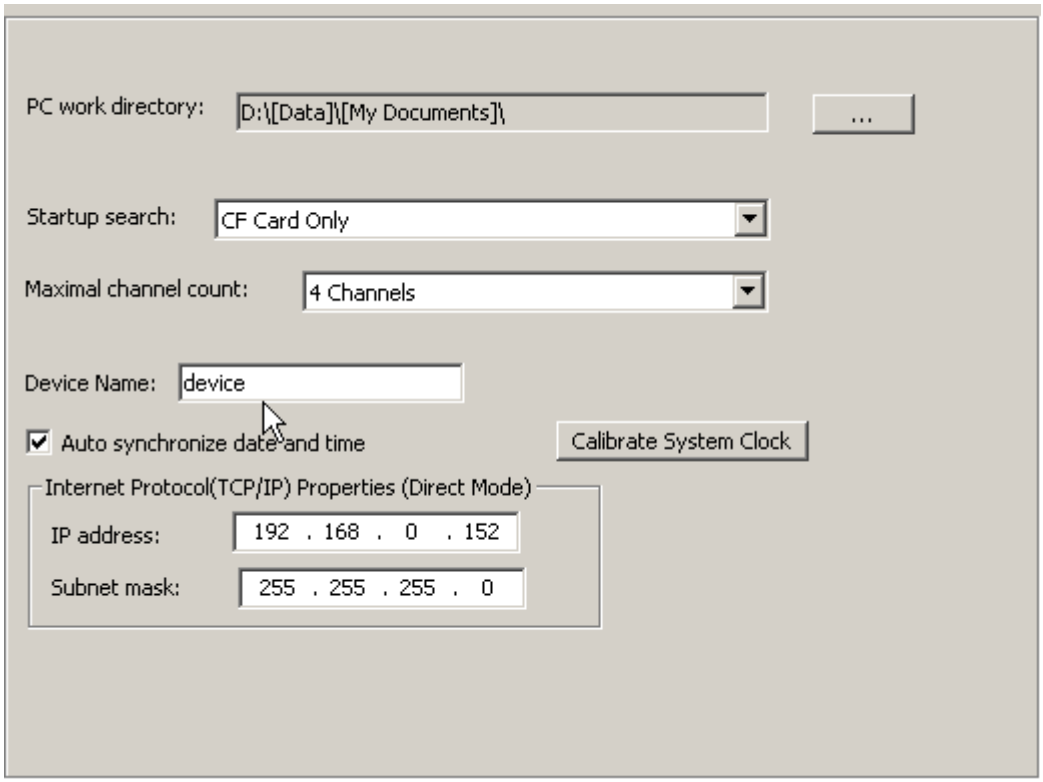
Or you can let DR3 obtain IP address from DHCP server on your local LAN if you connect DR3 to router or switch. But please notice, the router or switch that be connected DR3 must support MDI/MDI-X connection.

To let DR3 obtain IP address from DHCP server on your local LAN, please set DR3 connection method to LAN.



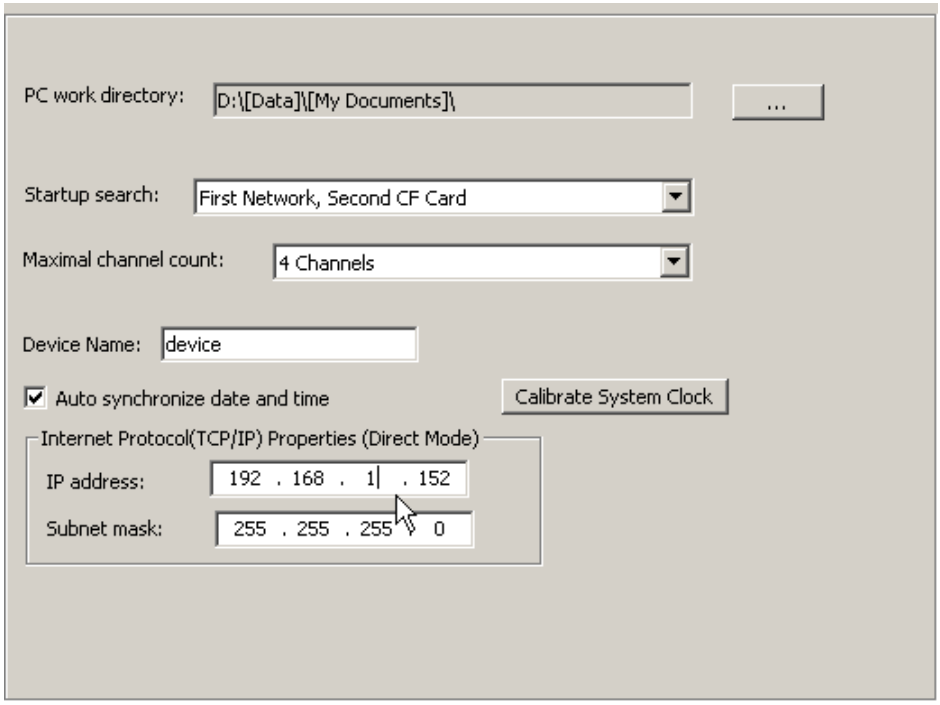
To connect DR3 to PC via local LAN, please connect DR3 to PC directly in first, and after connect successfully, then set DR3 to LAN option on NETWORK item, it will ensure DR3 can connect into LAN via switch or router.

You can set different Device Name for DR3-S1f you or your team has some DR3 . Then you can differentiate them based on different device name.

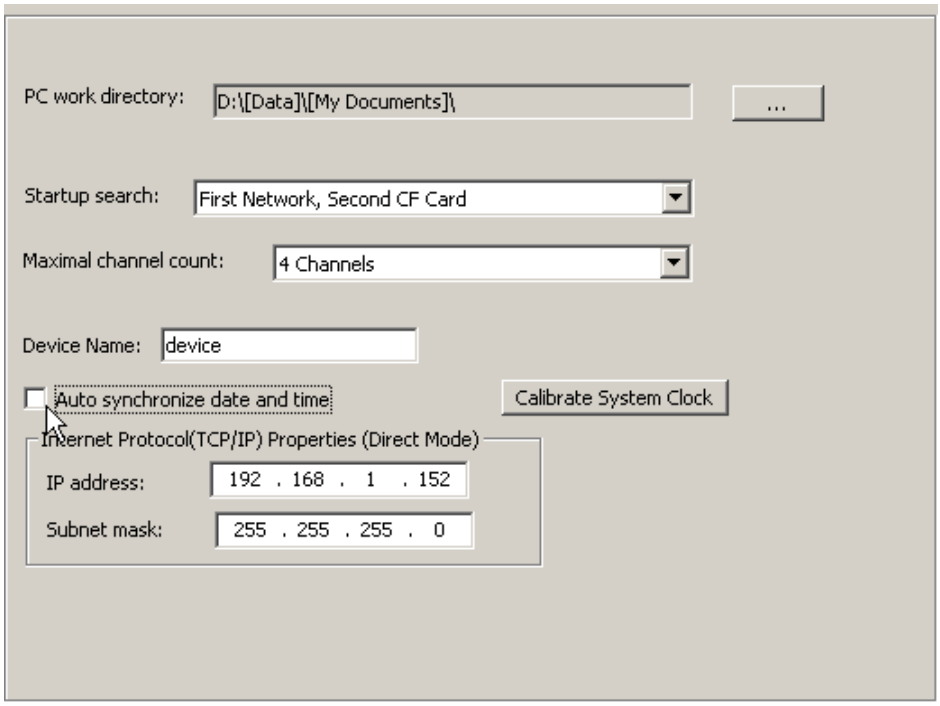


11.4 Auto Synchronize Date & Time between PC & DR3

DR3 Desktop will synchronize Date & Time information based on configuration on PC automatically.



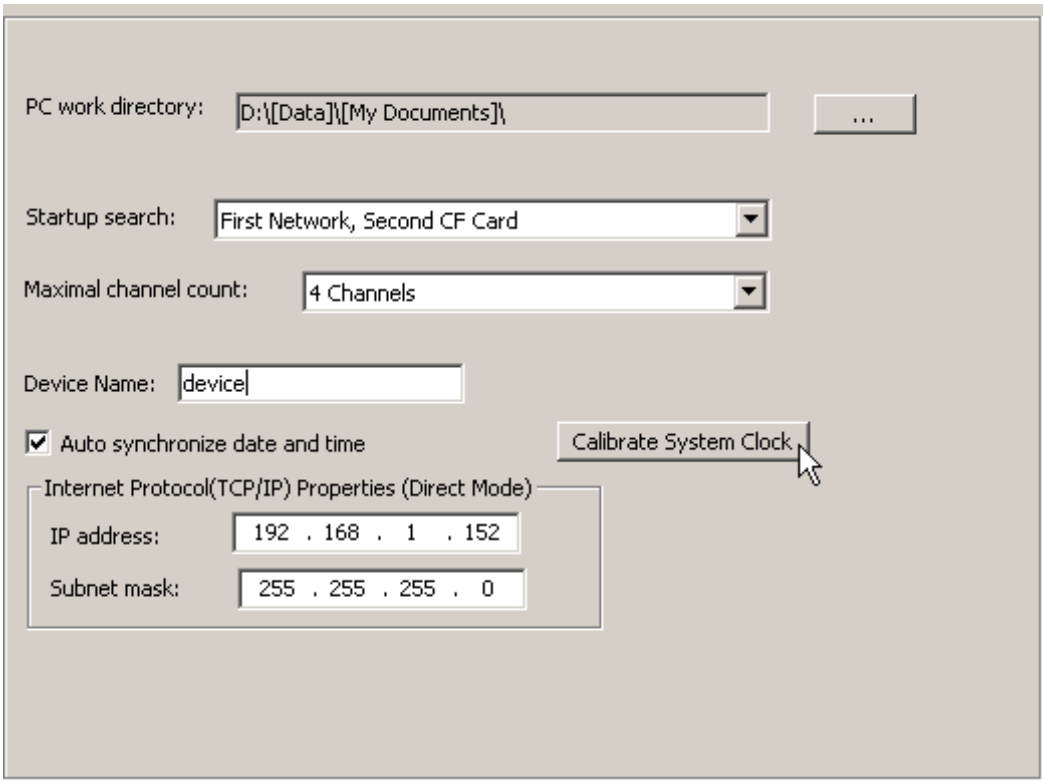
If you don't want to synchronize it, you can disable synchronized option.



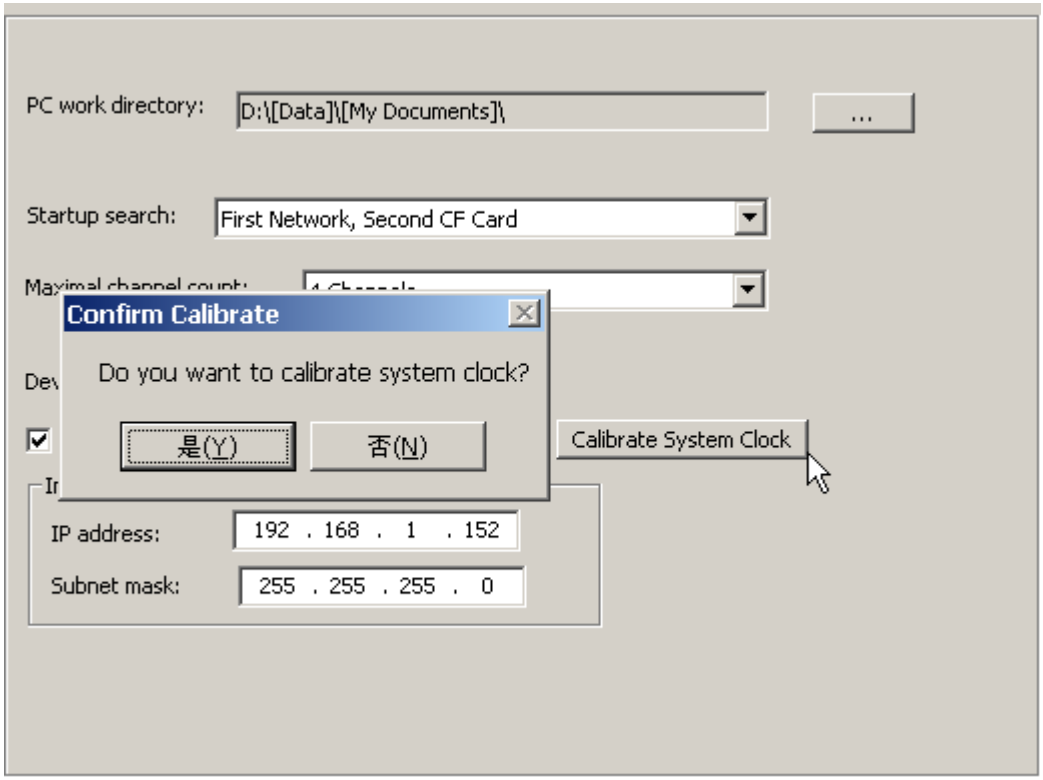
After you disable this option, DR3 Desktop will ignore the difference of date & time between PC and DR3 .

11.5 Calibrate System Clock of DR3

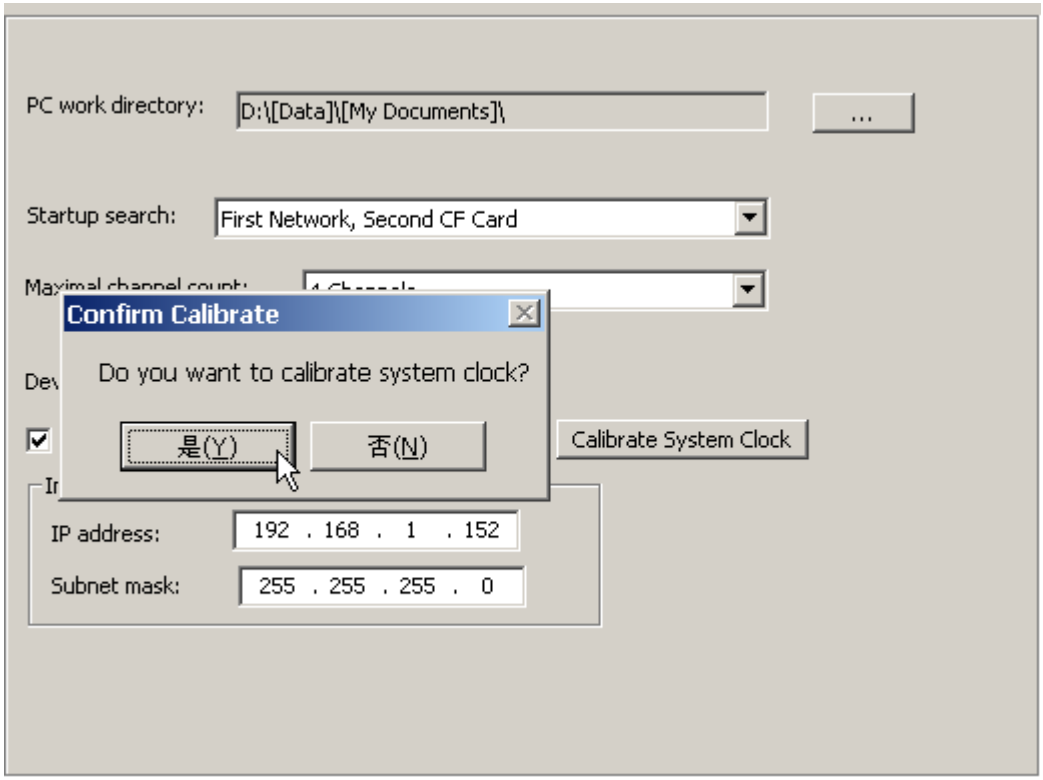
Sometimes the system clock of the DR3 need to be calibrated for accurate time recording, it is important for the Lap Timer. If you need to calibrate the system clock, click **Calibrate System Clock** button to calibrate the system clock of DR3-S1mmediately.



After you click **Calibrate System Clock** button, Desktop will prompt you to get the confirm again.



Click **Yes (Y)** button to confirm it again.

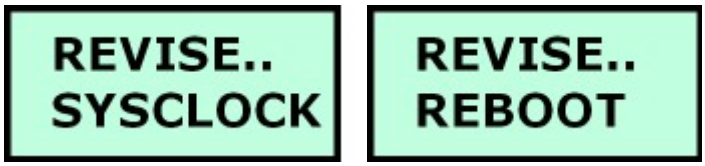


After you confirm it, the DR3 will begin to calibrate system clock.

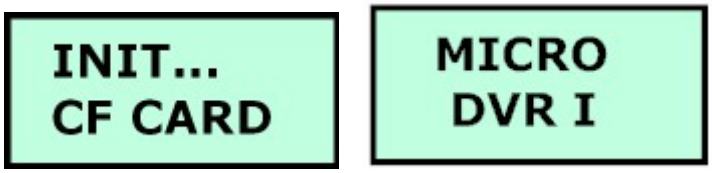
After the system clock of DR3-S1s calibrated successfully, the DR3 will restart again.

When system clock of DR3 be calibrated & rebooted, LCD on DR3 will display correlative status information.

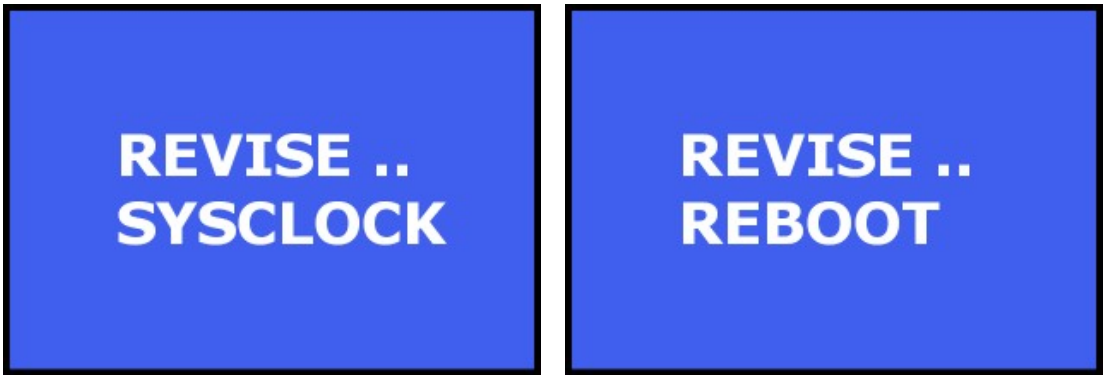
11.5.1 Calibrate System Clock of DR3-S1



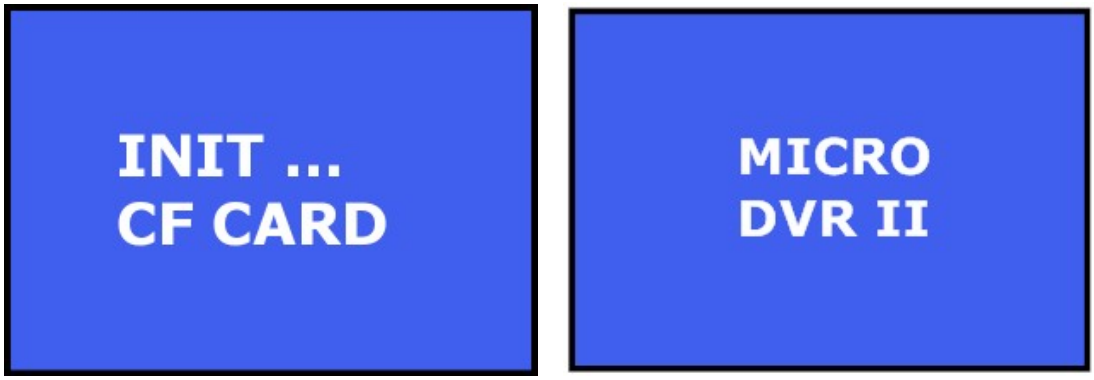
After the system clock of DR3-S1s calibrated successfully, the DR3 will restart again.



11.5.2 Calibrate System Clock of DR3-X1



After the system clock of DR3-S1s calibrated successfully, the DR3 will restart again.



12. About

Click **About** button  to get the details information of DR3 Desktop.

13. Configure DR3 by LCD Menu

13.1 Configure DR3-S1 using LCD Menu

13.1.1 Enter/Quit LCD Configuration Menu

Hold push the 3-Position button at least 3 seconds to enter LCD configuration menu, once you enter LCD configuration menu successfully, the LCD will display valid menu/menu item & parameter of these menu item depend on your DR3-S1 version.

After you finish configuration, press button or Key on IR remote control to quit to upper menu.

You may need press button or Key on IR remote control one or two times once depend on your position in menu.

Once you enter the LCD configuration menu, the system will wait for you to select & configure, if you don't press any buttons, the system will quit the LCD configuration menu after 10 sec automatically.

13.1.2 Configure DR3-S1

You can configure DR3-S1 in LCD menu via push switch/button or IR remote control.

13.1.2.1 Configure DR3-S1 using switch/button

Once you enter LCD configuration menu, you can switch menu using **LEFT** & **RIGHT** position of 3-Position switch, then press button to select the menu/menu item which you want to configure, using **LEFT** & **RIGHT** position of 3-Position switch to select the parameter value & parameter area that you want to configure, and then press button to save the configuration.

When you finish configuration, press button one or two times once to quit the LCD configuration menu.

13.1.2.2 Configure DR3-S1 using IR remote control

Once you enter LCD configuration menu, you can switch menu using & Key on IR remote control, then press Key to select the menu/menu item which you want to configure, using Key to select the parameter value & parameter area that you want to configure, and then press Key to save the configuration.

When you finish configuration, press Key one or two times once until to quit the LCD configuration menu.

13.1.3 LCD Configuration Menu Details

13.1.3.1 Menu

The valid menu of DR3-S1s:

- **VIDEO**
- **AUDIO**
- **RECORD**
- **OSD**
- **SYSTEM**
- **CF CARD**
- **BEACON**

In LCD configuration menu, switch **LEFT** & **RIGHT** position of 3-Position switch or using Key on IR remote control to navigate these menus.

Press button or Key to quit configuration menu return to ready status.

13.1.3.2 VIDEO Menu

Menu	Menu Item	Parameter
VIDEO	VIDEO Standard	STANDARD ● NTSC ● NTSC-433 ● PAL ● SECAM
	VIDEO Mode	MODE ● NORMAL ● SPORTS

● Menu Item – VIDEO / Standard

Default parameter is **PAL**, please select correct video standard depend on your video source.

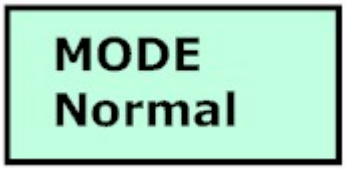
Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch the video standard parameter, then press button or Key to save the current configuration, press button or Key to quit the **VIDEO / STANDARD** menu.

After you finish all video configuration, press button or Key to quit the **VIDEO** menu.

● **Menu Item – VIDEO / Mode**

Default parameter is **NORMAL**, please select feat video record mode for your application.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch the video standard parameter, then press button or Key to save the current configuration, press button or Key to quit the **VIDEO / MODE** menu.



SPORTS MODE is optimized for recording of moveable quickly object, such as racing & extreme sports, you will get clear & steady video that better than **NORMAL MODE**.

13.1.3.3 AUDIO Menu

Menu	Menu Item	Parameter
AUDIO	AUDIO Source	SOURCE ● Line In ● Ext MIC ● Int MIC
	AUDIO Gain	GAIN ● Lowest ● Lower ● Low ● Medium

		● High

● **Menu Item – AUDIO / Source**

Default parameter is **Line In**, please select **Ext MIC** if you use external microphone input, or select **Int MIC** if you use internal microphone in the DR3 .

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **Line In**, **Ext MIC** & **Int MIC** input, then press button or Key to save the current configuration, press button or Key to quit the **AUDIO / Source** menu.

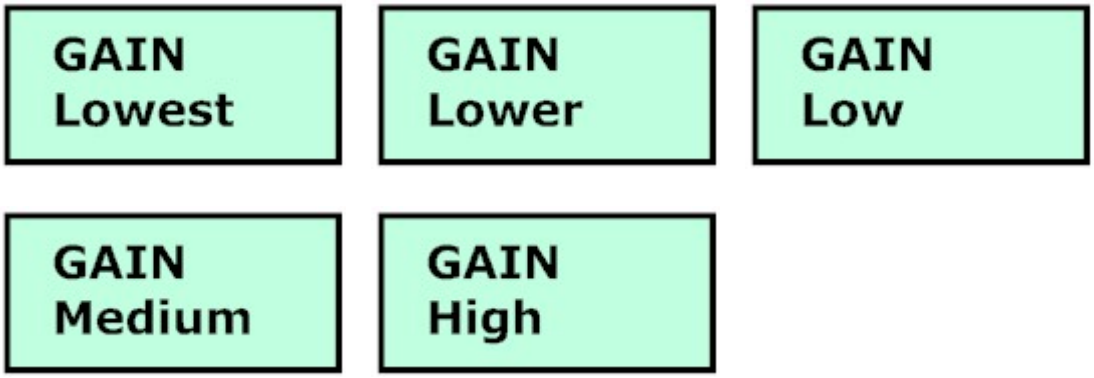
● **Menu Item – AUDIO / Gain**

If you record audio from internal or external microphone, you can set different volume gain depend on the sensitivity of microphone to get the best audio quality.

If you record audio from line in signal, the volume gain is invalid.

You can set it on Desktop software too.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **Low**, **Medium** & **High** volume gain when you using internal microphone or connect external microphone, then press button or Key to save the current configuration, press button or Key to quit the **AUDIO / Gain** menu.



After you finish all audio configuration, press button or Key to quit the **AUDIO** menu.

13.1.3.4 RECORD Menu

Menu	Menu Item	Parameter
RECORD	RECORD Format	FORMAT ● MPEG-2 ● MPEG-4
	RECORD Quality	QUALITY ● LQ ● EP ● LP ● SP ● HQ ● UQ (without audio)
	RECORD Auto REC	AUTO REC ● Disable ● Enable
	RECORD PowerREC	PowerREC ● Disable ● Enable
	RECORD Audio	AUDIO ● Yes ● No
	RECORD Profile	PROFILE ● Profile1

		● Profile2 …… ● Profile9 ● Custom
	RECORD Filename	FILENAME ● Standard ● Extended

● Menu Item – RECORD / Format

Default parameter is **MPEG-4**, please select feat video format that you need.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **MPEG-2** & **MPEG-4** parameter, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / FORMAT** menu.

● Menu Item – RECORD / Quality

Default parameter is **SP**, please select proper video quality to suit.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **LQ**, **EP**, **LP**, **SP** & **HQ** quality, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / QUALITY** menu.

● **Menu Item – RECORD / Auto REC**

Default value of **Auto REC** is Disable, if you want to enable DR3 to record automatically when it power on, please switch setting to Enable Auto REC.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / AUTO REC** menu.

● **Menu Item – RECORD / PowerREC**

PowerREC is designed for DR3 that power by power supplier in car, if you enable **PowerREC**, when you start up car, DR3 will begin to record automatically, and it will stop recording when DR3 detect car is power off, at once DR3 detect car start up again, DVR will start recording again, it will repeat when DVR detect that car start up & power off.

Default value of **PowerREC** is Disable, if you want to enable DR3 to record automatically when it detect car be start up, please switch setting to Enable Power REC.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / POWERREC** menu.

● **Menu Item – RECORD / Audio**

When you into this menu, you can open & close audio input when you record video.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to open or close audio input.

When you set **RECORD / Audio** option to **No**, audio input will be closed when you record, so the recording video will not include audio.

● **Menu Item – RECORD / Profile**

When you into this menu, you can change current profile item between all profile items that you configured.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch current profile item.

……

The special **Custom** profile can't be edit on DR3 Desktop, it only valid on LCD menu.

You can change configuration in profile **Custom** on DR3-S1 via LCD menu only, all changes of configuration that you set on DR3-S1 is active only when you set Custom as default profile of DR3-S1 via LCD menu.

Finish selecting, then press  button or 

Key to save the current configuration, the DR3-S1 will reboot automatically to enable current profile item.

After you finish all record configuration, press  button or  Key to quit the **RECORD** menu if you don't change current profile item.

● **Menu Item – RECORD / Filename**

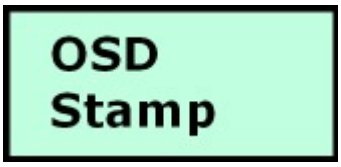
Now DR3 support two different filename format: Standard & Extended, the default is standard filename, you can select standard or extended filename in RECORD / Filename item.

Switch **LEFT** & **RIGHT** position of  3-Position switch or press  Key to select standard or extended filename.

13.1.3.5 OSD Menu

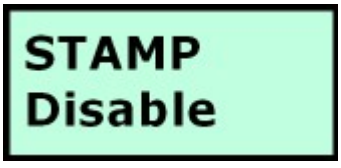
Menu	Menu Item	Parameter
OSD	OSD Stamp	STAMP ● Disable ● Enable

● Menu Item – OSD / Stamp



Default parameter is **Disable**, please select **Enable** if you want to display date & time stamp on screen of recording video, if you set stamp option to Disable, the date & time stamp will disappear on screen.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **OSD / STAMP** menu.



After you finish all audio configuration, press button or Key to quit the **OSD** menu.

13.1.3.6 SYSTEM Menu

Menu	Menu Item	Parameter
SYSTEM	SYSTEM Date	DATE ● 07-04-02
	SYSTEM Time	TIME ● 12:00:00
	SYSTEM Beep	BEEP ● Disable ● Enable
	SYSTEM CAM Volt	CAM VOLT ● *12V ~ 6V*
	SYSTEM PowerOff	POWEROFF ● Disable ● 5 Mins ● 10 Mins ● 15 Mins
	SYSTEM Bootload	BOOTLOAD ● V1.0.2
	SYSTEM Firmware	FIRMWARE ● 08-09-27
	SYSTEM Network	NETWORK ● Direct ● LAN

● Menu Item – SYSTEM / Date

The parameter format is yy-mm-dd, please set correct date.

Switch **RIGHT** position of 3-Position switch or use Key to select correct year; then switch **LEFT** position of 3-Position switch or press Key switch to month area, switch **RIGHT** position of 3-Position switch or press Key select correct

month; then switch **LEFT** position of 3-Position switch or press Key switch to day area, switch **RIGHT** position of 3-Position switch or press Key select correct day, switch **LEFT** position of 3-Position switch or press Key will switch to year again, finish setting the correct date, press button or Key to save the current configuration, press button or Key to quit **SYSTEM / DATE** menu.

● **Menu Item – SYSTEM / Time**

The parameter format is hour-minute-second, please set correct time.

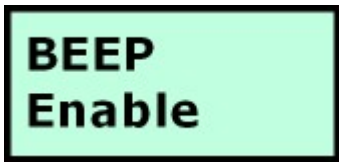
Switch **RIGHT** position of 3-Position switch or use Key to select correct hour; then switch **LEFT** position of 3-Position switch or press Key switch to minute area, switch **RIGHT** position of 3-Position switch or press Key select correct minute; hen switch **LEFT** position of 3-Position switch or press Key switch to second area, switch **RIGHT** position of 3-Position switch or press Key select correct second; switch **LEFT** position of 3-Position switch or press Key switch to hour again, finish setting the correct time, press button or Key to save the current configuration, press button or Key to quit **SYSTEM / TIME** menu.

● **Menu Item – SYSTEM / Beep**

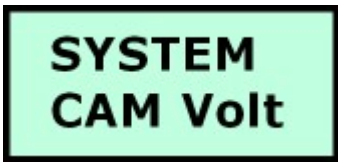
DR3-S1 will beep or vibrate to warn you when it starts or stops recording, in some special applications or occasion/environment, you may want to turn this function off, and you can disable beep/vibration function.

The default configuration is **Enable Beep**; you can disable it by switch setting to **Disable** to operate DR3-S1 in silent mode.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **SYSTEM / Beep** menu.



● **Menu Item – SYSTEM / CAM Volt**



DR3-S1 can power external device via power output adapter on Multi-Connect jump cable, you can power external bullet camera or external LCD monitor, you can adjust output voltage from 6V to 12V.

If you want to power external bullet cameras more than one, please set the output voltage lower than 11V, and you need connect AC power adapter for DR3-S1.

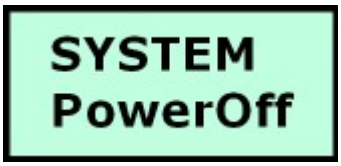
The parameter voltage of output power is 12V; please select feat output voltage for external camera.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to select feat output voltage for external camera, then press button or Key to save

the current configuration, press button or Key to quit the **SYSTEM / CAM VOLT** menu.

.....

● **Menu Item – SYSTEM / PowerOff**

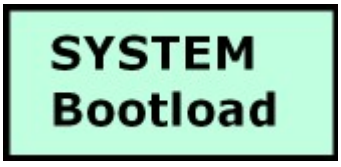


To save the battery power, you can enable the DR3-S1 power off automatically depend on the timer that you set.

The default status of Power-Off Timer is **Disable**.

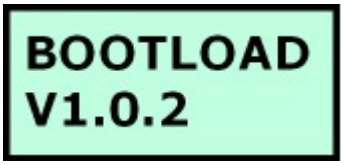
Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to Disable Power Off or select feat timer (5/10/15 Minutes) depending on your actual requirements, then press button or Key to save the current configuration, press button or Key to quit the **SYSTEM / POWEROFF** menu.

● **Menu Item – SYSTEM / Bootload**



This menu item display current boot loader version on your DR3-S1.

Press button or Key to display current boot loader version, press button or Key to quit the **SYSTEM / BOOTLOAD** menu.



● **Menu Item – SYSTEM / Firmware**

This menu item display current firmware version on your DR3-S1.

Press button or Key to display current boot loader version, press button or Key to quit the **SYSTEM / FIRMWARE** menu.

After you finish all SYSTEM configuration, press button or Key to quit the **SYSTEM** menu.

● **Menu Item – SYSTEM / Network**

DR3 support two different network connection method, you can connect DR3 to PC directly or connect to PC via your local LAN.

Press button or Key to change network connection method between **DIRECT** or **LAN** connection, press button or ey to quit the **SYSTEM / NETWORK** menu.

If you want to connect DR3 to PC directly, please set DR3 network connection to **DIRECT**, or set DR3 to **LAN** connection method, then connect DR3 to PC by switch or router. For details, please refer chapter 7.1.1.

After you finish all SYSTEM configuration, press button or Key to quit the **SYSTEM** menu.

13.1.3.7 BEACON Menu

Menu	Menu Item	Parameter
BEACON	BEACON LapTimer	LAPTIMER ● Disable ● Enable
	BEACON MaskTime	MASKTIME ● 10 Sec
	BEACON As Split	AS SPLIT ● Yes ● No
	BEACON Splits	SPLITS ● 0 Sec ● 1 Sec ● 2 Sec ● 3 Sec ● 4 Sec
	BEACON SysClock	SYSCLOCK ● True Up

● **Menu Item – BEACON / LapTimer**

Beacon option is only for LAP Timer version DR3.

Default status of Lap Timer is **Disable**, please select proper beacon status to suit.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **BEACON / LapTimer** menu.

● **Menu Item – BEACON / MaskTime**

Default parameter of beacon mask delay is **10 Sec**, please select proper delay time to suit.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to set proper value of beacon mask delay, then press button or Key to save the current configuration, press button or Key to quit the **BEACON / MaskTime** menu.

● **Menu Item – BEACON / As Split**

If you use Split Beacon on racing, you must switch **Split Signal Same as Beacon** option to enable it.

The default setting is **No**.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **No** & **Yes** option, then press button or Key to save the current configuration, press button or Key to quit the **BEACON / As Split** menu.

● **Menu Item – BEACON / Splits**

You can select the amount of Split Beacon for every loop; the maximum amount of Split Beacon is four on every loop.

If you don't use Split Beacon emitter on racing, please set the amount of Split Beacon emitter to zero or disable **Split Signal same as Beacon** option directly.

The default configuration of the amount of Split Beacon is **zero**.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch amounts of split beacon from **0** to **4**, then press button or Key to save the current configuration, press button or Key to quit the **BEACON / Splits** menu.

● **Menu Item – BEACON / SysClock**

The system clock of the DR3-S1 need to be calibrated for accurate time recording, it is important for the Lap Timer. If you need to calibrate the system clock, press button or Key to calibrate the system clock.

After you confirm **True Up** operate, the DR3-S1 will begin to calibrate system clock.

After the system clock of DR3-S1 is calibrated successfully, the DR3-S1 will restart.

After you finish all Beacon configuration, press button or Key to quit the **BEACON** menu if you needn't calibrate system clock.

13.1.4 LCD Configuration Menu Structure

Menu	Menu Item	Parameter
VIDEO	STANDARD	- NTSC - NTSC-433 - PAL - SECAM

	MODE	- Normal - Sports
AUDIO	SOURCE	- Line In - Ext MIC - Int MIC
	GAIN	- Lowest - Lower - Low - Medium - High
RECORD	FORMAT	- MPEG-2 - MPEG-4
	QUALITY	- LQ - EP - LP - SP - HQ - UQ
	AUTO REC	- Enable - Disable
	POWERREC	- Enable - Disable
	PROFILE	- Profile1 …… - Profile9 - Custom
	FILENAME	- Standard - Extended
OSD	STAMP	- Enable - Disable
SYSTEM	DATE	*08-10-01*
	TIME	*12:00:00*
	BEEP	- Enable - Disable
	CAM VOLT	- 12 V - 11 V …… - 6 V
	POWEROFF	- Disable - 5 Mins - 10 Mins

		- 15 Mins
	BOOTLOAD	V1.0.0
	FIRMWARE	08-09-27
	NETWORK	- Direct - LAN
BEACON	LAPTIMER	- Disable - Enable
	MASKTIME	*10 Sec*
	AS SPLIT	- Yes - No
	SPLITS	- 0 - 1 - 2 - 3 - 4 - 5
	SYSCLOCK	- True Up

13.2 Configure DR3-X1

13.2.1 Enter/Quit LCD Configuration Menu

Hold push the  3-Position button at least 3 seconds to enter LCD configuration menu, once you enter LCD configuration menu successfully, the LCD will display valid menu/menu item & parameter of these menu item depend on your DR3-X1 & 2/3/4CH DR3 version.

After you finish configuration, press  button or  Key on IR remote control to quit to upper menu.

You may need press button or Key on IR remote control one or two times once depend on your position in menu.

Once you enter the LCD configuration menu, the system will wait for you to select & configure, if you don't press any buttons, the system will quit the LCD configuration menu after 10 sec automatically.

13.2.2 Configure DR3-X1

You can configure DR3-X1 in LCD menu via push switch/button or IR remote control.

13.2.2.1 Configure DR3-X1 using switch/button

Once you enter LCD configuration menu, you can switch menu using **DOWN** & **UP** position of 3-Position switch, then press button to select the menu/menu item which you want to configure, using **DOWN** & **UP** position of 3-Position switch to select the parameter value & parameter area that you want to configure, and then press button to save the configuration.

When you finish configuration, press button one or two times once to quit the LCD configuration menu.

13.2.2.2 Configure DR3-X1 using IR control

Once you enter LCD configuration menu, you can switch menu using & Key on IR remote control, then press Key to select the menu/menu item which you want to configure, using Key to select the parameter value & parameter area that you want to configure, and then press Key to save the configuration.

When you finish configuration, press Key one or two times once until to quit the LCD configuration menu.

13.2.3 LCD Configuration Menu Details

13.2.3.1 Menu

The valid menu of DR3-X1 is:

- **VIDEO**
- **AUDIO**
- **RECORD**
- **OSD**
- **SYSTEM**
- **CF CARD**
- **BEACON**

In LCD configuration menu, current value of menu item & parameter is reverse display.

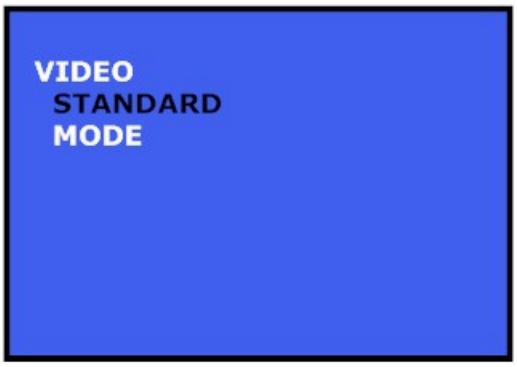
You can switch **DOWN** & **UP** position of 3-Position switch or using Key on IR remote control to navigate these menus.

Press button or Key to quit configuration menu return to ready status.

13.2.3.2 VIDEO Menu

● Menu Item – VIDEO / Standard

Default parameter is **PAL**, please select correct video standard depend on your video source.

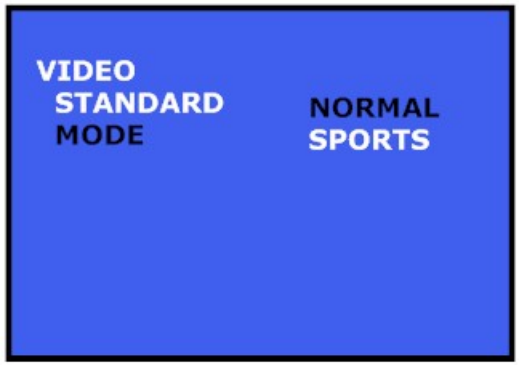


Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch the video standard parameter, then press button or Key to save the current configuration, press button or Key to quit the **VIDEO / STANDARD** menu.

After you finish all video configuration, press button or Key to quit the **VIDEO** menu.

● **Menu Item – VIDEO / Mode**

Default parameter is **NORMAL**, please select feat video record mode for your application.



Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch the video standard parameter, then press button or Key to save the current configuration, press button or Key to quit the **VIDEO / MODE** menu.

SPORTS MODE is optimized for recording of moveable quickly object, such as racing & extreme sports, you will get clear & steady video that better than **NORMAL MODE**.

After you finish all video configuration, press button or Key to quit the **VIDEO** menu.

13.2.3.3 AUDIO Menu

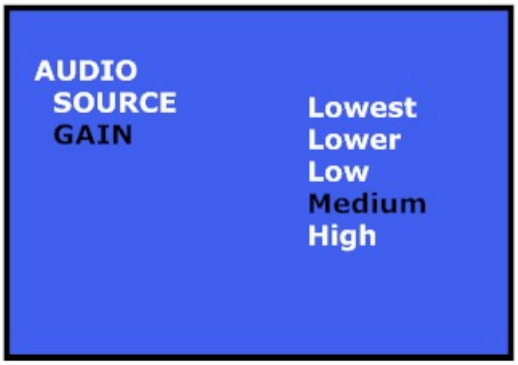
● **Menu Item – AUDIO / Source**

Default parameter is **Line In**, please select **Ext MIC** if you use external microphone input, or select **Int MIC** if you use internal microphone in the DR3-X1.

Switch **DOWN & UP** position of 3-Position switch or press Key to switch **Line In**, **Ext MIC** & **Int MIC** input, then press button or Key to save the current configuration, press button or Key to quit the **AUDIO / Source** menu.

● **Menu Item – AUDIO / Gain**

If you record audio from internal or external microphone, you can set different volume gain depend on the sensitivity of microphone to get the best audio quality.



If you record audio from line in signal, the volume gain is invalid.

You can set it on Desktop software too.

Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch **Low**, **Medium** & **High** volume gain when you using internal microphone or connect external microphone, then press button or Key to save the current configuration, press button or Key to quit the **AUDIO / Gain** menu.

After you finish all audio configuration, press button or Key to quit the **AUDIO** menu.

13.2.3.4 RECORD Menu

● **Menu Item – RECORD / Format**

Default parameter is **MPEG-4**, please select feat video format that you need.

Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch **MPEG-2** & **MPEG-4** parameter, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / FORMAT** menu.

● **Menu Item – RECORD / Quality**

Default parameter is **SP**, please select proper video quality to suit.

Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch **LQ**, **EP**, **LP**, **SP** & **HQ** quality, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / QUALITY** menu.

● **Menu Item – RECORD / Auto REC**

Default value of **Auto REC** is Disable, if you want to enable DR3 to record automatically when it power on, please switch setting to Enable Auto REC.

Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / AUTO REC** menu.

● **Menu Item – RECORD / Power REC**

PowerREC is designed for DR3 that power by power supplier in car, if you enable **PowerREC**, when you start up car, DR3 will begin to record automatically, and it will stop recording when DR3 detect car is power off, at once DR3 detect car start up again, DVR will start recording again, it will repeat when DVR detect that car start up & power off.

Default value of **PowerREC** is Disable, if you want to enable DR3 to record automatically when it detect car be start up, please switch setting to Enable Power REC.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / POWERREC** menu.

● **Menu Item – RECORD / Audio**

When you into this menu, you can open & close audio input when you record video.

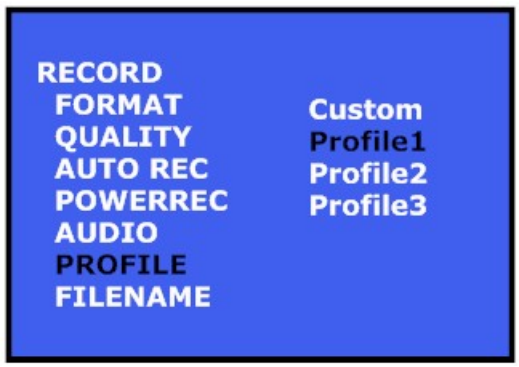
When you set **RECORD / Audio** option to **No**, audio input will be closed when you record, so the recording video will not include audio.

Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to open or close audio input.

Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch **Yes** & **No** option, then press button or Key to save the current configuration, press button or Key to quit the **RECORD / AUDIO** menu.

● **Menu Item – RECORD / Profile**

When you into this menu, you can change current profile item between all profile items that you configured.



Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch current profile item.

The special **Custom** profile can't be edit on DR3 Desktop, it only valid on LCD menu.

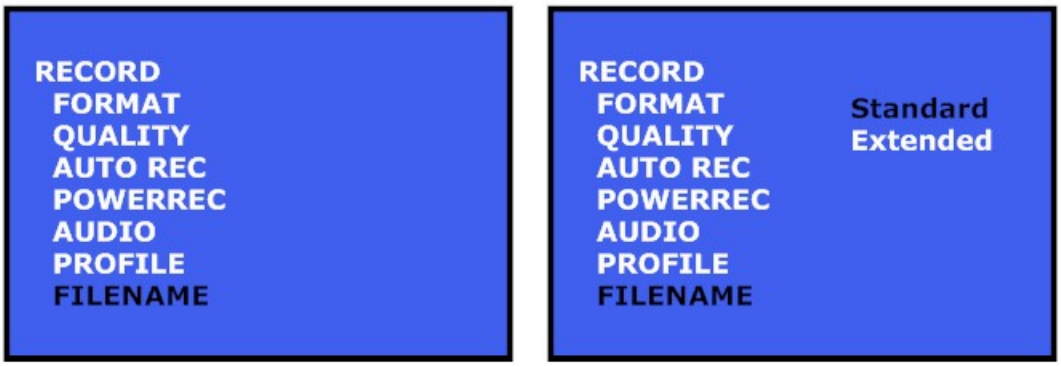
You can change configuration in profile **Custom** on DR3-X1 via LCD menu only, all changes of configuration that you set on DR3-X1 is active only when you set **Custom** as default profile of DR3-X1 via LCD menu.

Finish selecting, then press button or Key to save the current configuration, the DR3-X1 will reboot automatically to enable current profile item.

After you finish all record configuration, press button or Key to quit the **RECORD** menu if you don't change current profile item.

● Menu Item – RECORD / Filename

Now DR3 support two different filename format: Standard & Extended, the default is standard filename, you can select standard or extended filename in RECORD / Filename item.

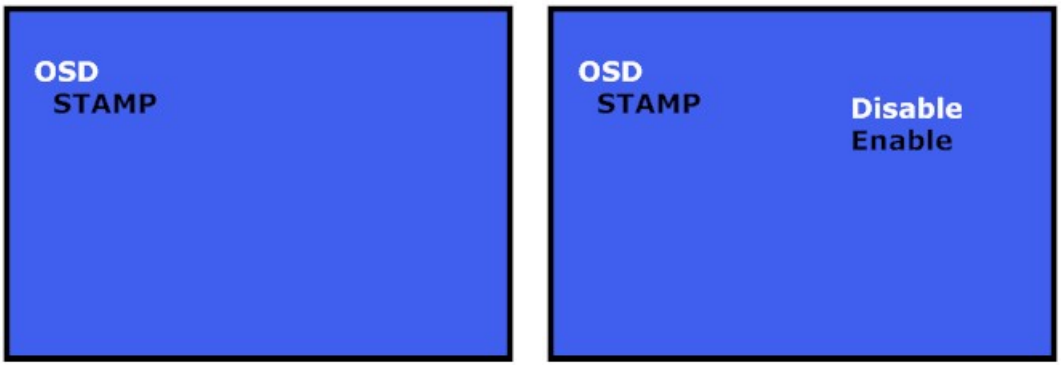


Switch **LEFT** & **RIGHT** position of 3-Position switch or press Key to select standard or extended filename.

13.2.3.5 OSD Menu

● **Menu Item – OSD / Stamp**

Default parameter is **Disable**, please select **Enable** if you want to display date & time stamp on screen of recording video, if you set stamp option to **Disable**, the date & time stamp will disappear on screen.



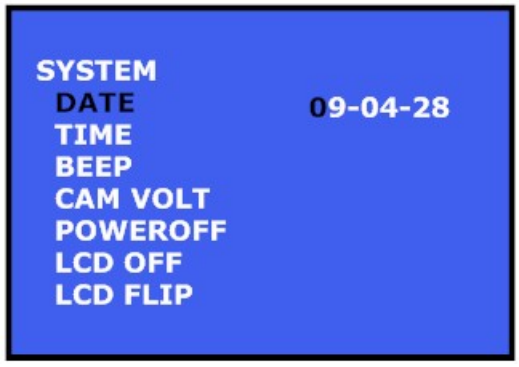
Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **OSD / STAMP** menu.

After you finish all audio configuration, press button or Key to quit the **OSD** menu.

13.2.3.6 SYSTEM Menu

● **Menu Item – SYSTEM / Date**

The parameter format is yy-mm-dd, please set correct date.



Switch **UP** position of 3-Position switch or use Key to select correct year; then switch **DOWN** position of 3-Position switch or press Key switch to month area, switch **UP** position of 3-Position switch or press Key select correct

month; then switch **DOWN** position of 3-Position switch or press Key switch to day area, switch **UP** position of 3-Position switch or press Key select correct day, switch **DOWN** position of 3-Position switch or press Key will switch to year again, finish setting the correct date, press button or Key to save the current configuration, press button or Key to quit **SYSTEM / DATE** menu.

● **Menu Item – SYSTEM / Time**

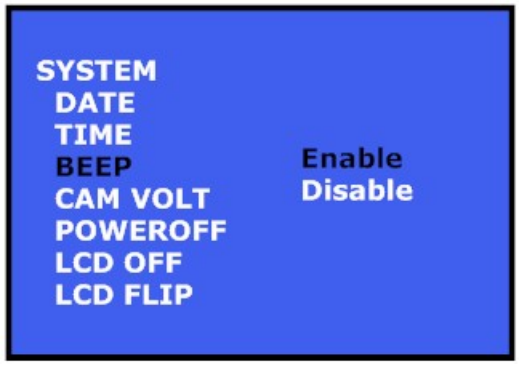
The parameter format is hour-minute-second, please set correct time.

Switch **UP** position of 3-Position switch or use Key to select correct hour; then switch **DOWN** position of 3-Position switch or press Key switch to minute area, switch **UP** position of 3-Position switch or press Key select correct minute; hen switch **DOWN** position of 3-Position switch or press Key switch to second area, switch **UP** position of 3-Position switch or press Key select correct second; switch **DOWN** position of 3-Position switch or press Key switch to hour again, finish setting the correct time, press button or Key to save the current configuration, press button or Key to quit **SYSTEM / TIME** menu.

● **Menu Item – SYSTEM / Beep**

DR3-X1 will beep or vibrate to warn you when it starts or stops recording, in some special applications or occasion/environment, you may want to turn this function off, and you can disable beep/vibration function.

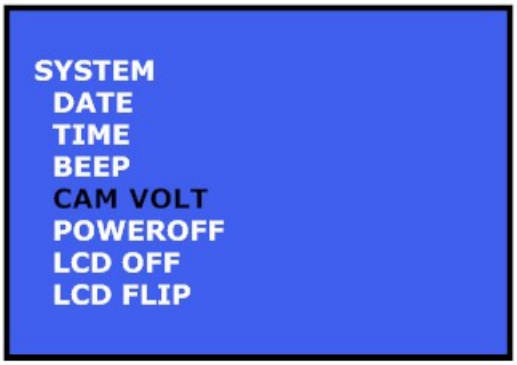
The default configuration is **Enable Beep**; you can disable it by switch setting to **Disable** to operate DR3-X1 in silent mode.

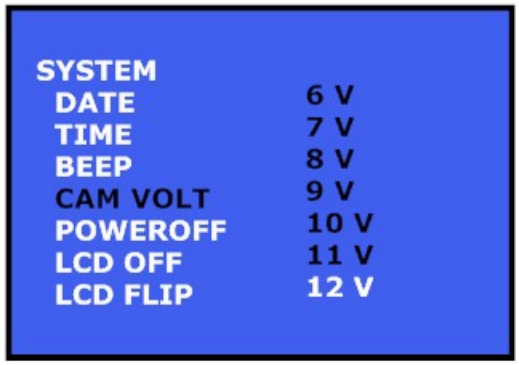


Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **SYSTEM / Beep** menu.

● **Menu Item – SYSTEM / CAM Volt**

DR3-X1 can power external device via power output adapter on Multi-Connect jump cable, you can power external bullet camera or external LCD monitor, you can adjust output voltage from 6V to 12V.





If you want to power external bullet cameras more than one, please set the output voltage lower than 11V, and you need connect AC power adapter for DR3-X1.

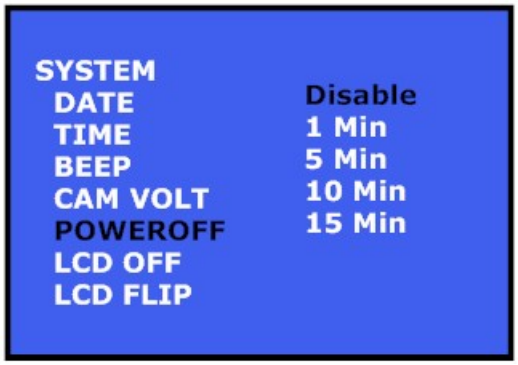
The parameter voltage of output power is 12V; please select feat output voltage for external camera.

Switch **DOWN** & **UP** position of 3-Position switch or press Key to select feat output voltage for external camera, then press button or Key to save the current configuration, press button or Key to quit the **SYSTEM / CAM VOLT** menu.

● **Menu Item – SYSTEM / PowerOff**

To save the battery power, you can enable the DR3-X1 power off automatically depend on the timer that you set.

The default status of Power-Off Timer is **Disable**.



Switch **DOWN** & **UP** position of 3-Position switch or press Key to Disable Power Off or select feat timer (5/10/15 Minutes) depending on your actual requirements, then press button or Key to save the current configuration, press button or Key to quit the **SYSTEM / POWEROFF** menu.

● **Menu Item – SYSTEM / LCD Off**

To save the battery power, you can enable the DR3-X1 TFT LCD off automatically depend on the timer that you set.

The default status of LCD OFF is disabling.

Switch **DOWN** & **UP** position of 3-Position switch or press Key to Disable LCD Off or select feat timer (15/30 Second or 1 Minute) depending on your actual requirements, then press button or Key to save the current configuration, press button or Key to quit the **SYSTEM / LCD OFF** menu.

When you enable **LCD OFF** function & set timer, the TFT LCD on DR3-X1 will power off automatically at once special timer that you set finish.

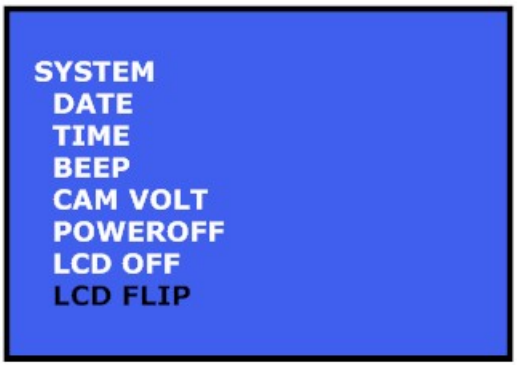
To power on TFT LCD again, please hold button 2 second to power on TFT LCD under normal status; if DR3 under recording status, please hold button 2 second to power on TFT LCD again.

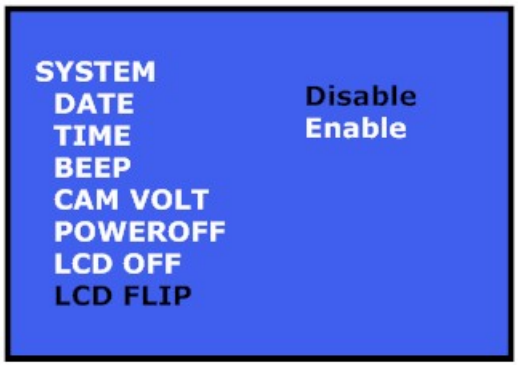
After you finish all system configuration, press button or Key to quit the **SYSTEM** menu.

● **Menu Item – SYSTEM / LCD Flip**

When you clip DR3 to waistband using buckle, or clip DVR on arm, maybe the screen of DR3 is reversed, you can flip LCD to view screen correctly.

The default status of **LCD FLIP** is disabling.





Switch **DOWN** & **UP** position of 3-Position switch or press Key to Disable or Enable LCD Flip depending on the position of your DR3, then press button or Key to save the current configuration, press button or Key to quit the **SYSTEM / LCD FLIP** menu.

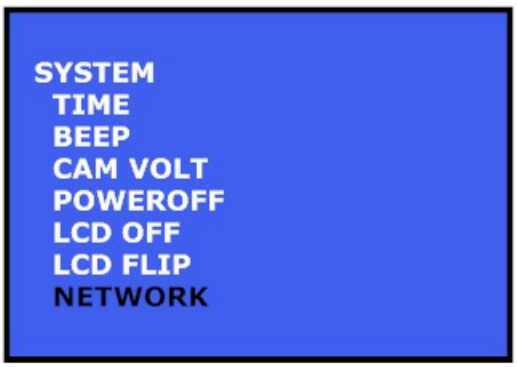
When you enable **LCD FLIP** function, the TFT LCD on DR3 will display reversedly.

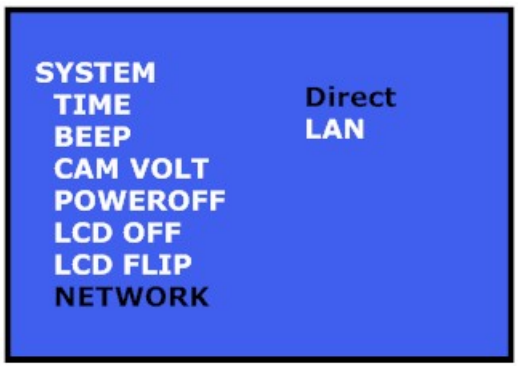
After you finish all system configuration, press button or Key to quit the **SYSTEM** menu.

● **Menu Item – SYSTEM / Network**

DR3 support two different network connection methods, you can connect DR3 to PC directly or connect to PC via your local LAN.

Press button or Key to change network connection method between **DIRECT** or **LAN** connection, press button or ey to quit the **SYSTEM / NETWORK** menu.





If you want to connect DR3 to PC directly, please set DR3 network connection to **DIRECT**, or set DR3 to **LAN** connection method, then connect DR3 to PC by switch or router. For details, please refer chapter 7.1.1.

After you finish all SYSTEM configuration, press button or Key to quit the **SYSTEM** menu.

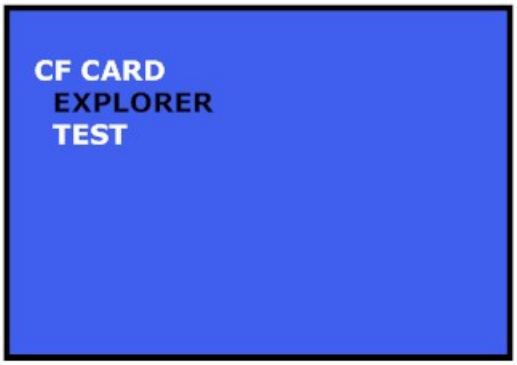
13.2.3.7 CF CARD Menu

You can evaluate the performance of CF card & delete recording video on DR3 directly.

● **Menu Item – CF CARD / Explorer**

You can delete recording video on DR3 directly that needn't do it on PC.

Enter menu, select **CF CARD** option, then select **EXPLORER** item, DR3 will display current recording video that on CF card.



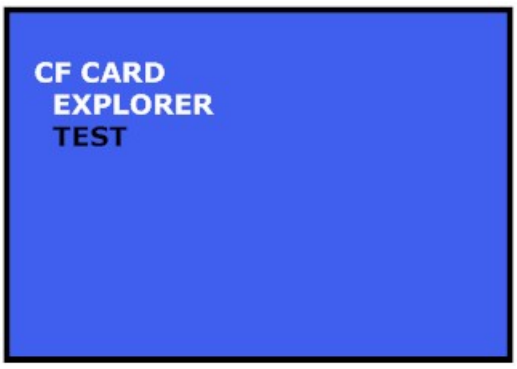
Select recording video that you want to delete using Switch **DOWN** & **UP** position of 3-Position switch or press Key, when confirm message be display on

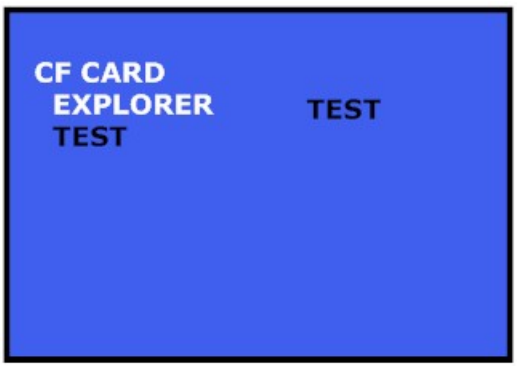
screen, using Switch **DOWN** & **UP** position of 3-Position switch or press ▲ ▼ Key to select **OK**, press button or OK Key to delete it.

After you delete video file that you select, DR3 will return main explorer screen. You will find the file that you select had been deleted.

● **Menu Item – CF CARD / Test**

You can test CF card before you use it into DR3 to ensure the performance of CF card can match your requirement.

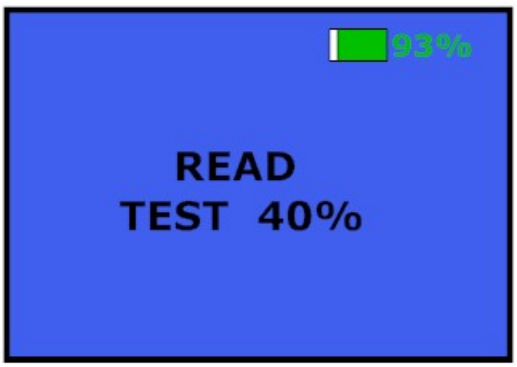




Enter menu, select **CF CARD** option, then select **TEST** item, DR3 will test write & read performance of CF card that you insert into DR3.

After testing finish, DR3 will display process of testing, it will test WRITE performance in first, then test READ performance, after testing finish, DR3 will reboot.

If DR3 display PASS message on screen, it means current CF card can match performance requirement of DR3, you can use this CF card securely.

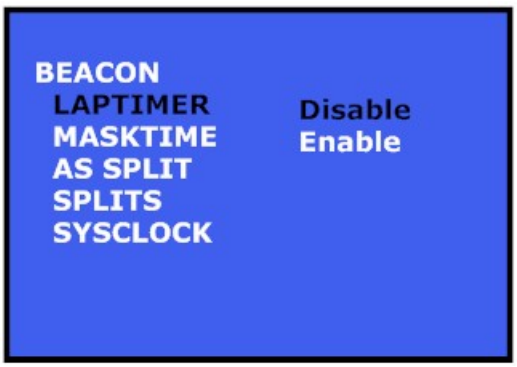


13.2.3.8 BEACON Menu

Beacon option is only for LAP Timer version DR3.

● **Menu Item – BEACON / LapTimer**

Default status of Lap Timer is **Disable**, please select proper beacon status to suit.



Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch **Disable** & **Enable** option, then press button or Key to save the current configuration, press button or Key to quit the **BEACON / LapTimer** menu.

● **Menu Item – BEACON / MaskTime**

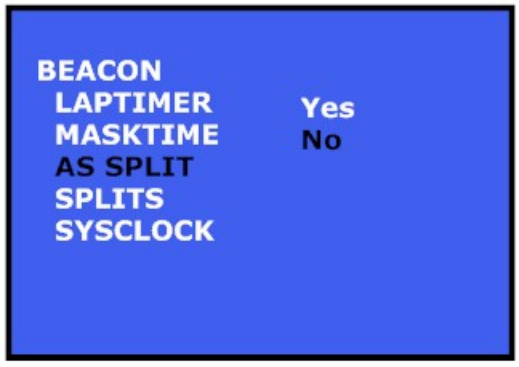
Default parameter of beacon mask delay is **10 Sec**, please select proper delay time to suit.

Switch **DOWN** & **UP** position of 3-Position switch or press Key to set proper value of beacon mask delay, then press button or Key to save the current configuration, press button or Key to quit the **BEACON / MaskTime** menu.

● **Menu Item – BEACON / As Split**

If you use Split Beacon on racing, you must switch **Split Signal Same as Beacon** option to enable it.

The default setting is **No**.



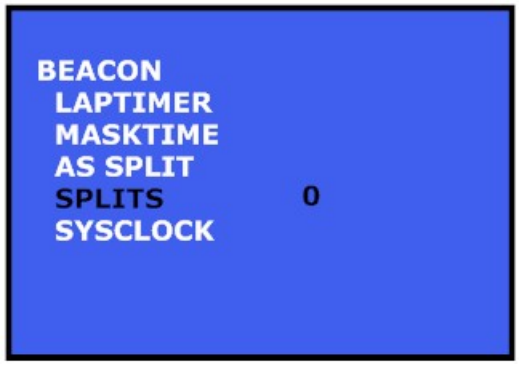
Switch **DOWN** &**UP**position of 3-Position switch or press Key to switch **No** & **Yes** option, then press button or Key to save the current configuration, press button or Key to quit the **BEACON / As Split** menu.

● **Menu Item – BEACON / Splits**

You can select the amount of Split Beacon for every loop; the maximum amount of Split Beacon is four on every loop.

If you don't use Split Beacon emitter on racing, please set the amount of Split Beacon emitter to zero or disable **Split Signal same as Beacon** option directly.

The default configuration of the amount of Split Beacon is **zero**.



Switch **DOWN** & **UP** position of 3-Position switch or press Key to switch amounts of split beacon from **0** to **4**, then press button or Key to save the current configuration, press button or Key to quit the **BEACON / Splits** menu.

● **Menu Item – BEACON / SysClock**

The system clock of the DR3-X1 need to be calibrated for accurate time recording, it is important for the Lap Timer. If you need to calibrate the system clock, press button or Key to calibrate the system clock.

After you confirm **True Up** operate, the DR3-X1 will begin to calibrate system clock.

After the system clock of DR3-X1 is calibrated successfully, the DR3-S1 will restart.

After you finish all Beacon configuration, press button or Key to quit the **BEACON** menu if you needn't calibrate system clock.

13.2.4 LCD Configuration Menu Structure

Menu	Menu Item	Parameter

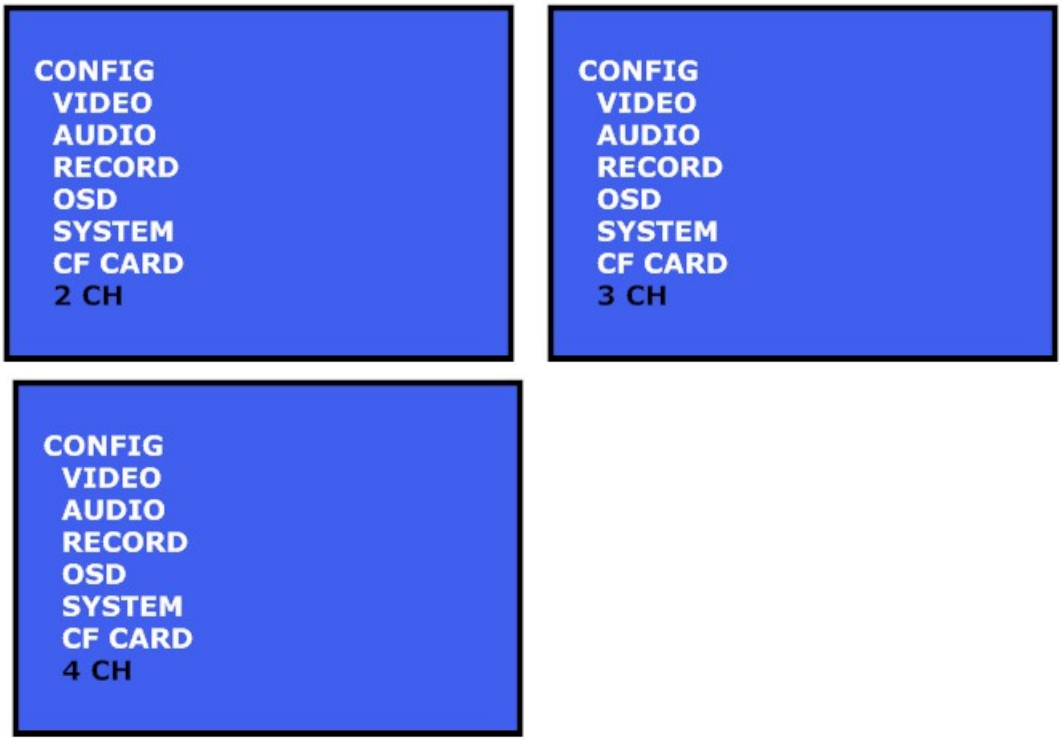
VIDEO	STANDARD	- NTSC - NTSC-433 - PAL - SECAM
	MODE	- Normal - Sports
AUDIO	SOURCE	- Line In - Ext MIC - Int MIC
	GAIN	- Lowest - Lower - Low - Medium - High
RECORD	FORMAT	- MPEG-2 - MPEG-4
	QUALITY	- LQ - EP - LP - SP - HQ - UQ
	AUTO REC	- Enable - Disable
	POWERREC	- Enable - Disable
	AUDIO	- Yes - No
	PROFILE	- Profile1 …… - Profile9 - Custom
	FILENAME	- Standard - Extended
OSD	STAMP	- Enable - Disable
SYSTEM	DATE	*08-10-01*
	TIME	*12:00:00*
	BEEP	- Enable - Disable
	CAM VOLT	- 12 V - 11 V ……

		- 6 V
	POWEROFF	- Disable - 1 Min - 5 Min - 10 Min - 15 Min
	LCD OFF	- Disable - 15 Sec - 30 Sec - 1 Min
	LCD FLIP	- Disable - Enable
	NETWORK	- Direct - LAN
CF CARD	EXPLORER	*File Explorer*
	TEST	- TEST
BEACON	LAPTIMER	- Disable - Enable
	MASKTIME	*10 Sec*
	AS SPLIT	- Yes - No
	SPLITS	- 0 - 1 - 2 - 3 - 4 - 5
	SYSCLOCK	- True Up

13.3 Configure Multi Channel DR3

13.3.1 Enter/Quit LCD Configuration Menu

Hold push the ◖ 3-Position button at least 3 seconds to enter LCD configuration menu, once you enter LCD configuration menu successfully, the LCD will display valid menu/menu item & parameter of these menu item depend on your DR3-X1 & 2/3/4CH DR3 version.



After you finish configuration, press button or Key on IR remote control to quit to upper menu.

You may need press button or Key on IR remote control one or two times once depend on your position in menu.

Once you enter the LCD configuration menu, the system will wait for you to select & configure, if you don't press any buttons, the system will quit the LCD configuration menu after 10 sec automatically.

13.3.2 Configure 2/3/4 Channels DR3

You can configure DR3-X1 in LCD menu via push switch/button or IR remote control.

13.3.2.1 Configure Multi-Channel DR3 using switch/button

Once you enter LCD configuration menu, you can switch menu using **DOWN** & **UP** position of 3-Position switch, then press button to select the menu/menu item which you want to configure, using **DOWN** & **UP** position of 3-Position switch to

select the parameter value & parameter area that you want to configure, and then press button to save the configuration.

When you finish configuration, press button one or two times once to quit the LCD configuration menu.

13.3.2.2 Configure Multi Channels DR3 using IR control

Once you enter LCD configuration menu, you can switch menu using & Key on IR remote control, then press Key to select the menu/menu item which you want to configure, using Key to select the parameter value & parameter area that you want to configure, and then press Key to save the configuration.

When you finish configuration, press Key one or two times once until to quit the LCD configuration menu.

13.3.3 LCD Configuration Menu Details

13.3.3.1 Menu

The valid menu of Multi-Channels DR3-S1s:

- **4 CH (3 CH / 2 CH)**

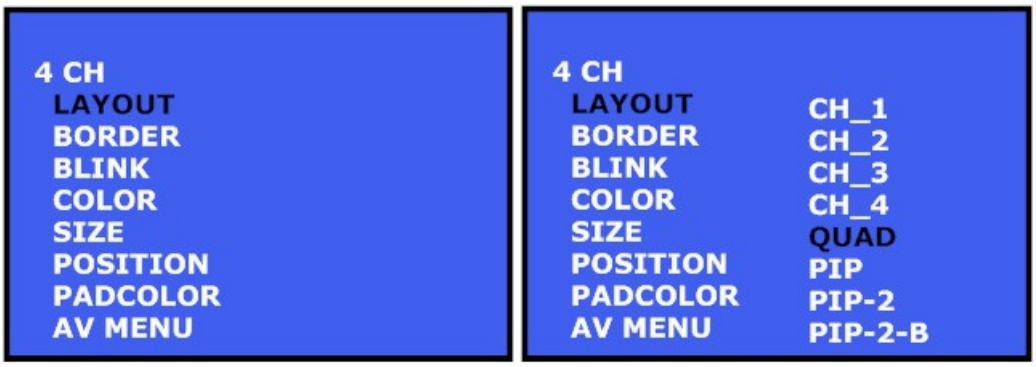
● Menu Item – 4 CH / Layout

You can select any input camera to record when you use one camera input of all four cameras that connected to 4CH DR3 . The **CH_1**, **CH_2**, **CH_3** & **CH_4** item mean which camera that connect to appointed connector on 4CH DR3 . When you select any channel that you want to record, 4CH DR3 will working as same as 1CH DR3 .

If you want to record 4 channel video at the same time, please select **QUAD**. The recorded video will include 4 channel videos in one video file.

If you select more than one camera at the same time, you can select feat PIP display mode for your application.

The **PIP**, **PIP-2**, **PIP-2-B**, **H-Split**, **V-Split**, **PIP-3** & **PIP-3-B** is valid PIP mode for 4CH DR3.

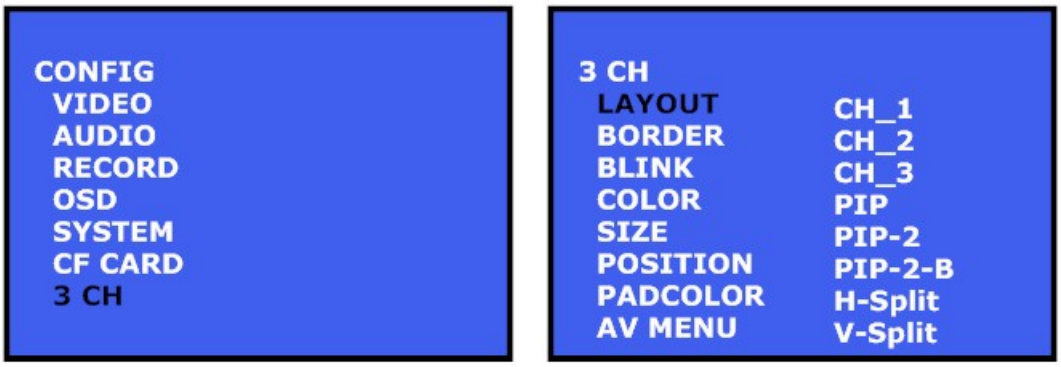


Switch **DOWN** & **UP** position of 3-Position switch or press Key to select input channel & PIP mode, then press button or Key to save the current configuration, press button or Key to quit the **4 CH / LAYOUT** menu.

In Multi-Channel DR3 LCD menu, priority of Layout is higher than Input; the Layout menu setting will disable Input menu setting.

● **Menu Item – 3 CH / Layout**

If your DR3 is 3 Channels DR3, the valid Layout option as follow:



The valid input option of 3CH DR3 is **CH_1**, **CH_2** & **CH_3**, and the valid layout option of 3CH DR3 is **PIP**, **PIP-2**, **PIP-2-B**, **H-Split**, **V-Split**, **PIP-3** & **PIP-3-B**.

● **Menu Item – 2 CH / Layout**

If your DR3 is 2 Channels DR3, the valid Layout option as follow:

The valid input option of 3CH DR3 is **CH_1** & **CH_2**, and the valid layout option of 3CH DR3 is **PIP**, **H-Split** & **V-Split**.

● **Menu Item – 4 CH / Border**

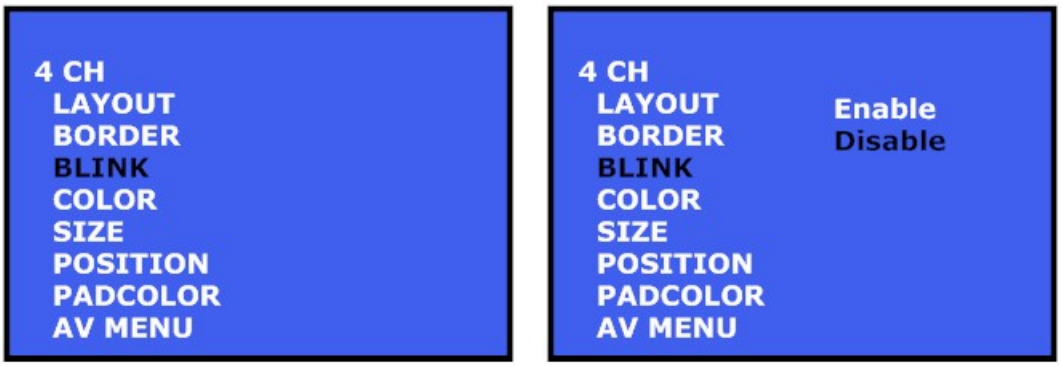
When you use more than 2 channel video inputs, you can enable/disable or select different styles of frame for a better scene effect.

● **Menu Item – 4 CH / Color**

You can select 4 different styles of border frame.

● **Menu Item – 4 CH / Blink**

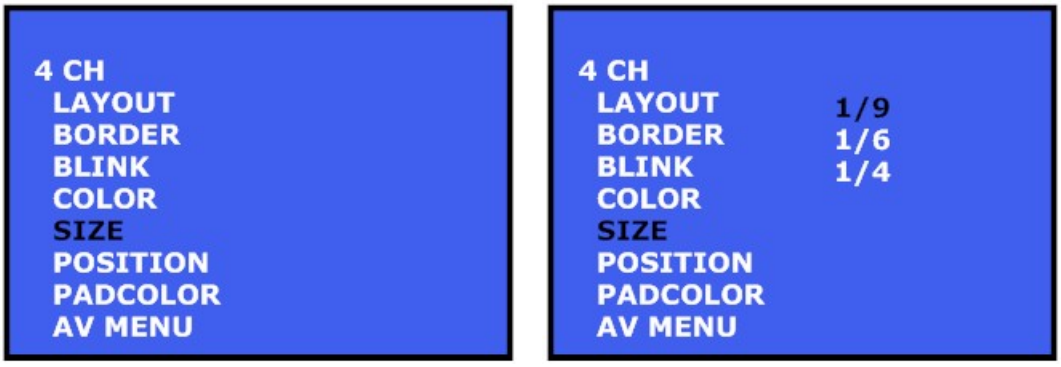
At the same time, you can switch on **Border Blink** option to enable frame of video glint.



● **Menu Item – 4 CH / Size**

When you connect more than one camera & select PIP Layout mode, you can set secondary video signal display as different size that according to your configuration.

You can set secondary video to one of three sizes: 1/9, 1/6 or 1/4 of full screen.



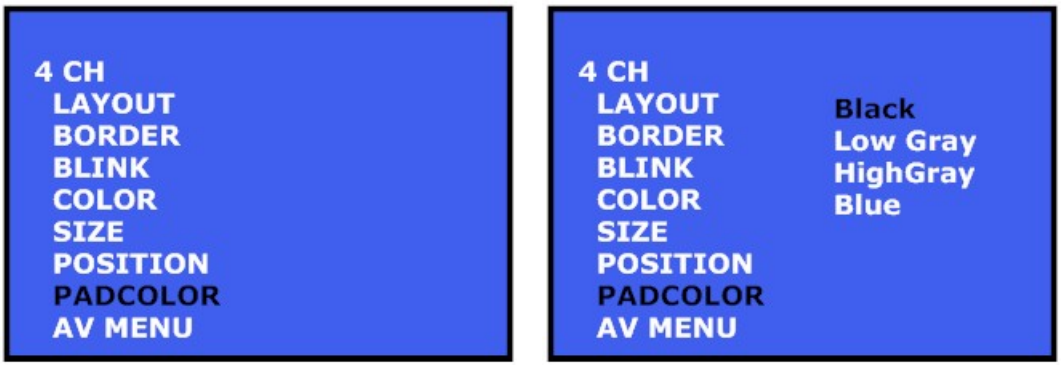
● **Menu Item – 4 CH / Position**

You can configure any position for PIP recording video, it has nine different positions, and you can select any position for your requirement from **Position** option.

You can configure or switch the array method of Picture-In-Picture via the DR3 LCD Menu & IR remote controller.

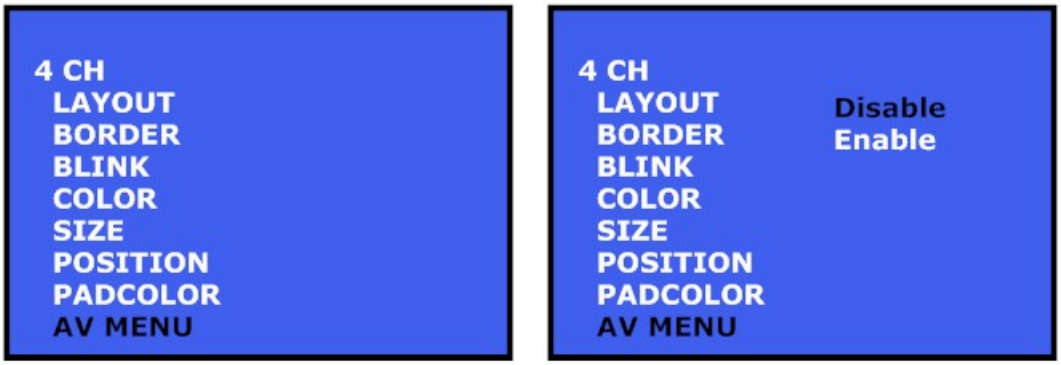
● **Menu Item – 4 CH / PadColor**

You can select 4 different color of screen background.



● **Menu Item – 4 CH / AV Menu**

2/3/4 Channel DR3 supports analog output of configuration Menu to TV or Monitor, when you connect a TV or Monitor to the Audio/Video Output, you can preview current video & the configure menu if you enable menu output.



For details information of Multi-Channel DR3 configuration, please consult **Chapter 8** for details.

After you finish all 2/3/4 CH configurations, press button or Key to quit the **2/3/4 CH** Menu.

NOTE: This option is only for 2/3/4-Channels DR3 ; it is not supported by 1-CH DR3 .

14. Firmware Upgrade

NOTE: Please don't connect camera & other external device to DR3 when you upgrade DR3!

The firmware of the DR3 can be upgraded if necessary. The DR3 will check the core image file on CF card while power up. If image & OSD file is found then the firmware of the DR3 will be upgraded automatically. Please follow below instructions to upgrade.

1) Format CF card in FAT32 file system.
2) Copy imge.2510.img and osd.img to the root of CF card.
3) Use **DR3 Desktop** to generate DEVICE.INI depended on your needs.
   DEVICE.INI must be under the root of CF card while upgrading.
4) Power off and then insert CF card into DR3 .
5) Turn on the power of DR3 .
6) The firmware will be upgraded after power on. The LED turns to red, then yellow and alternately flashes red and yellow several times. It takes about two minutes to upgrade.
   At the same time, LCD will display schedule of upgrade process if you upgrade from Firmware V1.0.4 or newer.
   When the DR3 upgrades successfully, it will reboot automatically.
   Update DR3-S1

   Update DR3-X1

   *** DON'T TURN OFF POWER DURING THIS PERIOD!!**
7) The DR3 will be rebooted automatically after upgrade. The LED will change to red, yellow and then green. It takes about 12 seconds to reboot.
8) Over if the LED is green. A Beep will sound one time once the DR3 upgrades successfully.

**** To Upgrade 4 Channel DR3 , after reboot successfully, you must power off & power on 4 Channel DR3 manually.***

The file, updmgr.txt, will be found under the root of CF card. The phrase of following can be found in the content of updmgr.txt.
Kernel image: image.2510.img[Sun Oct 15 03:33:24 2006] == (Mon Apr 2 03:33:24 2007)

The date and time correspond to the version of firmware. Upgrade is successful if the date and time is the same as the data and time kernel generated.

**** Power supply has to be guaranteed normal while upgrading. DR3 can not be restored if upgrade fails.***

**** Wait at least 4-5 minutes till reboot successful. LED keeps constant green if reboot successful.***

15. FAQ

1) LED yellow flash
   CF card is full. Change CF.

2) LED is red
   Failure or battery is low. Use the AC power adapter or external battery pack.

3) Charging period
   It takes 5-8 hours to charge a fully discharged battery. The charge indicator LED will go out once fully charged.

4) File is not accessible or DR3 can't startup
   File system is wrong. This can happed after abnormal power off and long time usages of CF card. Format CF card in FTAT32 file system.

5) DR3 can't be connected to PC via network connection
   You need configure network environment of DR3 & PC, please refer Chapter 7.1.1

Appendix

Appendix A: Details of connector

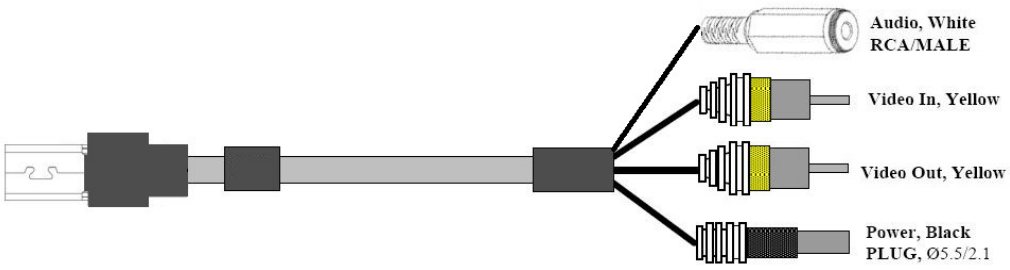
Appendix A

Multi-Connect Interface on Board

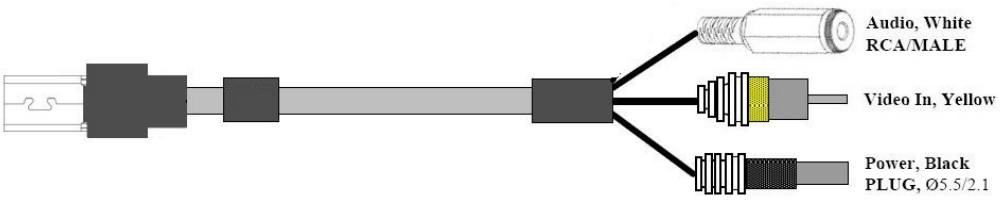
1- Audio Left
2- Audio Right
3- Video Input 0
4- Video Input 1
5- Reserve
6- Reserve
7- LANC
8- CAM Power
9- GND

The number is corresponding to the pin number of Multi-Connect connector of Multi-Connect cable.

Multi-Connect Cable



Multi-Connect cable for DR3-S1



Multi-Connect cable for DR3-X1

Appendix B: Edit Recording Video

You can edit recording video that be record by DR3, for editing, import recording video to Adobe Premiere in first, after you import video, you can edit video using Adobe Premiere.

Before you edit MPEG-4 video on Adobe Premiere, the DivX Codec must be installed on your system successfully first.

Before you edit MPEG-2 video on Adobe Premiere, the MainConcept Codec must be installed on your system successfully, it be included in installation package of Adobe Premiere CS3 or CS4.

Revision

04/28/2009, Version 2.0.5

- Improve DR3 Desktop Start-Up
- Add Sports recording Mode
- Add POWERREC recording mode
- Add AUTO REC recording mode
- Add UQ (10M) recording quality
- Add without Audio option of recording mode
- Add LCD FLIP display mode
- Add extended filename support
- Add 2CH & 3CH DR3 support
- Add file manager in DR3 menu
- Improve OSD & Date/Time Stamp function
- Improve network connection
- Add GPS support
- Adjust LCD menu
- Adjust configuration menu on Desktop
- Fix Bug

09/27/2008, Version 2.0.3

- Improve DR3 Desktop Start-Up
- Motion Detection support
- Add volume gain adjust of microphone
- Improve MPEG-2 conversion
- Improve GUI
- Add shortcut key to preview system information
- Add information preview of internal battery
- Add Sync/Configure/Preview via LAN connection
- Add Auto Power-off function of DR3 & TFT LCD
- Adjust LCD menu
- Adjust configuration menu on Desktop
- Fix Bug

05/10/2008, Version 2.0.1

- Improve DR3 Desktop Start-Up
- Fix Bug

04/28/2008, Version 2.0.0

- Using Synchronize technology
- Change GUI
- Improve adjustable position support of Lap Timer
- Adjust options arrange

- Add Record Key Frame option for surveillance application
- Change some default configuration
- Change configuration file to DEVICE.INI

03/10/2008, Version 1.1.2

- Add Multi-Configuration Item
- Add Split Beacon support
- Add adjustable position support of Lap Timer
- Add new arrange method of PIP
- Add Record Key Frame option for surveillance application
- Improve upgrade process
- Improve MPEG-2 conversion code
- Change configuration file name to DEVICE.INI

10/18/07, Version 1.1.1

- Add 1M(CIF/SIF) Bitrates Encode Option
- Add 8M Bitrates Encode Option
- Add Single recording video file Cycle Record Mode
- Add Full Disk (CF Card) Cycle Record Mode
- Add Analog Menu Output for 4 Channel DR3
- Replace OSD library for 1 Channel DR3 , Support black border of OSD font
- Improve large CF card support

09/24/07, Version 1.1.0

- Improve 4-Channel DR3 support
- Improve large CF card support
- Add Power-Off Timer function
- Add Cycle Record function
- Add customized LCD Display
- Add System Clock Calibrate function
- Decrease the time of starting

06/08/07

- Add on 4-Channel DR3 support
- Optimize LANC Remote Control support

05/08/07

- Optimize LANC Remote Control support
- Add new version IR Remote Control support
- Optimize Record on Power On function
- Add Beep/Vibration Enable/Disable option
- Add Time Stamp in two format & disable option
- Optimize Beacon support
- Optimize DR3 Configure Utility GUI

- Fix some bug
- Release DR3 Configure Utility V1.0.5 Final version
- Release Firmware V1.0.5 Image upgrade file Final version
- Release Official User's Manual V1.0.5.1

04/28/07

- Add more version LANC Remote Control support
- Add Auto Record on Boot function
- Add Beep Enable/Disable option
- Optimize Beacon support
- Release DR3 Configuration File Generator V1.0.5
- Release Firmware V1.0.5 Image upgrade file
- Release Official User's Manual V1.0.5

04/02/07

- Add LCD support
- Add DR3 status display on LCD
- Add configuration menu based on LCD
- Release DR3 Configuration File Generator V1.0.4
- Release Firmware V1.0.4 Image upgrade file
- Release Official User's Manual V1.0.4

02/13/07

- Add osd.img into firmware upgrade
- Release DR3 Configuration File Generator V1.0.3
- Release Firmware Image upgrade file

10/01/06

- Initial Release